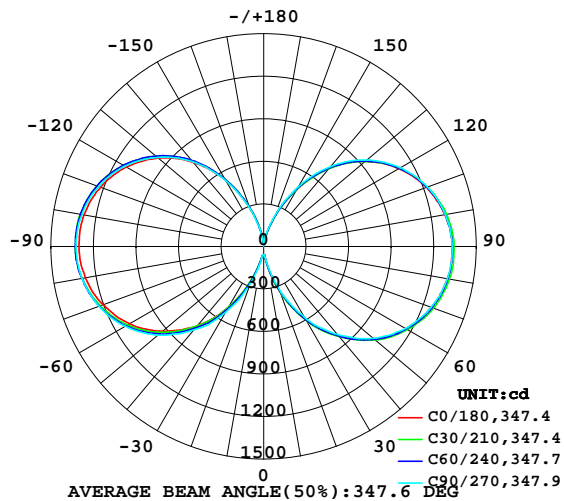


**LUMINAIRE PHOTOMETRIC TEST REPORT**

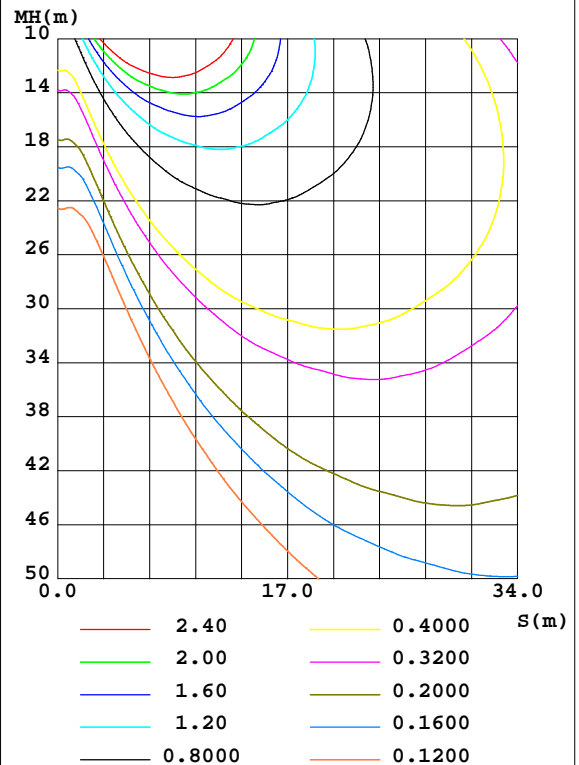
Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 159.09 lm/W			
MODEL	OB200c	Imax(cd)	1377	S/MH(C0/180)	6.03
NOMINAL POWER(W)	80	LOR(%)	100.0	S/MH(C90/270)	6.08
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	12590	$\eta$ UP,DN(C0-180)	24.5,25.5
NOMINAL FLUX(lm)	12590.1	CIE CLASS	DIFFUSE	$\eta$ UP,DN(C180-360)	25.0,24.9
LAMPS INSIDE	1	$\eta$ up(%)	49.5	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220	$\eta$ down(%)	50.5	CIBSE SHR MAX	1.55

**LUMINOUS INTENSITY DISTRIBUTION DIAGRAM**



**C0 PLANE ISOLUX DIAGRAM (UNIT:lx)**



**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**ZONAL FLUX DIAGRAM**

**ZONAL FLUX DIAGRAM:**

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	119.0	114.6	102.1	85.57	74.98	70.55	83.96	97.40	0- 10	6.927	6.927	0.06,0.06
20	341.9	340.6	317.4	276.7	242.8	243.3	276.0	305.7	10- 20	54.89	61.82	0.49,0.49
30	595.0	602.8	576.4	535.0	493.5	499.2	534.3	570.3	20- 30	199.2	261.0	2.07,2.07
40	822.2	827.1	810.9	775.4	731.3	744.9	767.9	816.0	30- 40	427.4	688.4	5.47,5.47
50	1014	1023	1007	983.7	931.6	951.8	973.5	1023	40- 50	692.5	1381	11,11
60	1160	1167	1155	1147	1092	1115	1126	1181	50- 60	962.9	2344	18.6,18.6
70	1259	1266	1257	1261	1204	1231	1235	1287	60- 70	1194	3538	28.1,28.1
80	1316	1321	1315	1331	1276	1303	1302	1351	70- 80	1363	4901	38.9,38.9
90	1330	1335	1330	1351	1303	1328	1322	1368	80- 90	1451	6352	50.5,50.5
100	1298	1301	1300	1327	1286	1312	1301	1343	90-100	1449	7800	62,62
110	1222	1228	1229	1260	1224	1251	1238	1270	100-110	1355	9155	72.7,72.7
120	1099	1105	1111	1144	1119	1144	1131	1151	110-120	1181	10336	82.1,82.1
130	935.2	937.3	948.8	983.9	970.4	992.3	977.9	985.3	120-130	944.9	11281	89.6,89.6
140	723.3	720.3	737.0	777.3	776.4	795.2	781.2	771.7	130-140	675.0	11956	95,95
150	464.8	463.6	486.0	525.2	539.4	548.7	538.5	513.0	140-150	404.3	12360	98.2,98.2
160	215.4	215.6	231.5	265.6	287.9	294.5	281.0	256.1	150-160	179.8	12540	99.6,99.6
170	48.32	48.86	57.18	73.31	90.29	90.94	81.86	65.94	160-170	46.36	12586	100,100
180	16.04	16.23	16.28	16.29	16.05	16.25	16.28	16.30	170-180	3.780	12590	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

**Conical surface Flux(90deg): 999.91 lm**

**%lum = 7.9%**

**%lamp = 7.9%**

**Conical surface Flux(120deg): 2343.8 lm**

**%lum = 18.6%**

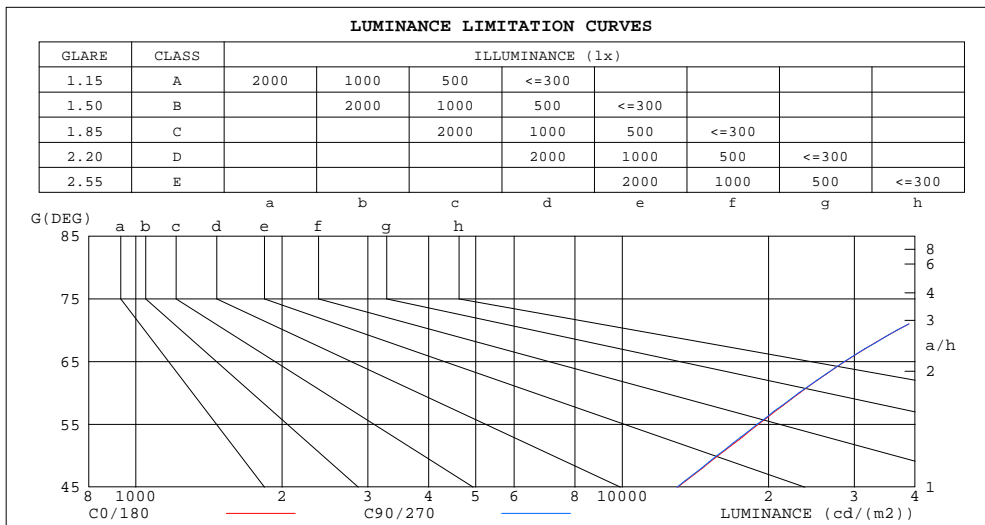
**%lamp = 18.6%**

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**LUMINANCE LIMITATION CURVES**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	152481	152425
80	75809	75741
75	49890	49899
70	36816	36753
65	28739	28667
60	23191	23099
55	19079	18978
50	15771	15670
45	13008	12960

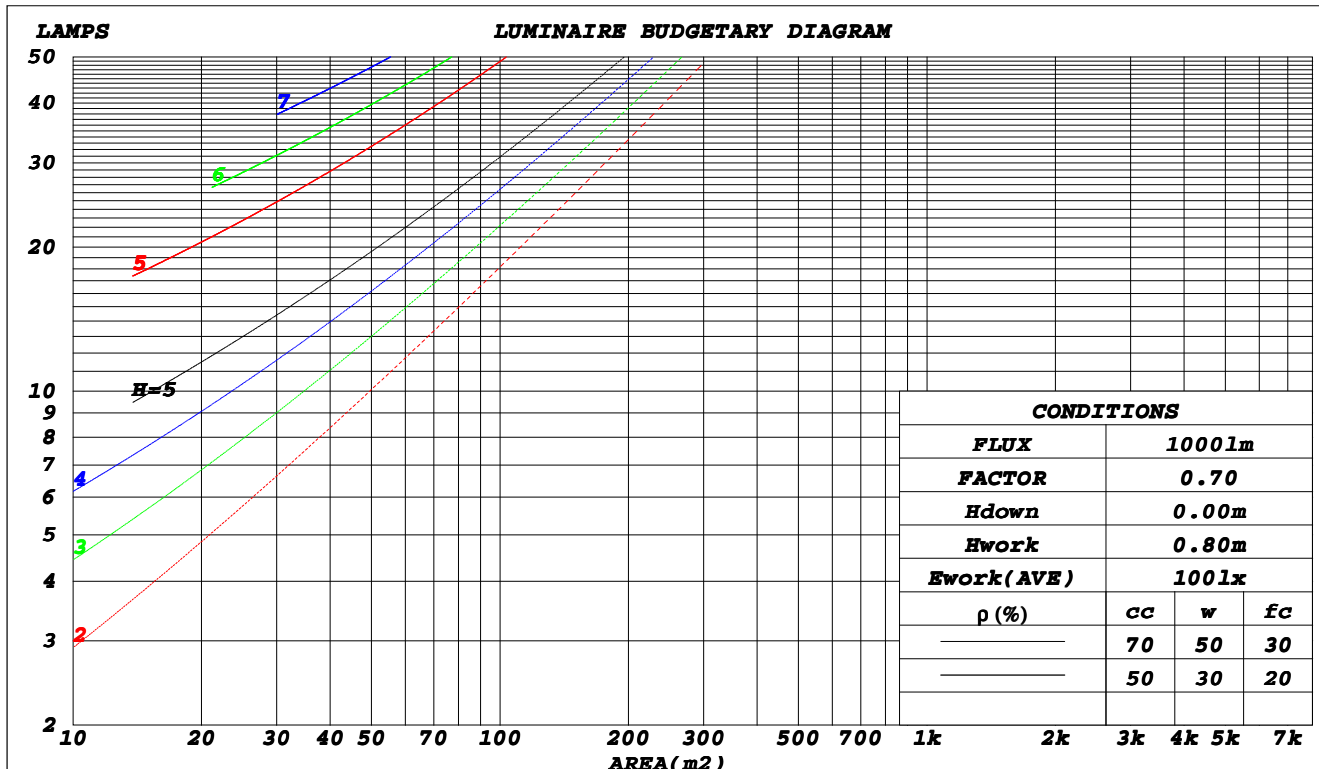
**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
0.0	1.07	1.07	1.07	.99	.99	.99	.84	.84	.84	.69	.69	.69	.57	.57	.57	.50
1.0	.85	.79	.73	.78	.72	.67	.64	.60	.56	.52	.49	.46	.41	.38	.36	.30
2.0	.71	.62	.55	.65	.57	.51	.53	.47	.42	.42	.38	.34	.32	.29	.26	.21
3.0	.60	.51	.43	.55	.46	.40	.45	.38	.33	.35	.30	.26	.27	.23	.19	.15
4.0	.52	.42	.35	.47	.39	.32	.39	.32	.26	.30	.25	.20	.23	.19	.15	.11
5.0	.46	.36	.29	.42	.33	.26	.34	.27	.21	.27	.21	.17	.20	.15	.12	.08
6.0	.40	.31	.24	.37	.28	.22	.30	.23	.18	.23	.18	.14	.17	.13	.10	.07
7.0	.36	.27	.20	.33	.24	.19	.27	.20	.15	.21	.16	.12	.16	.11	.08	.05
8.0	.32	.23	.17	.29	.21	.16	.24	.18	.13	.19	.14	.10	.14	.10	.07	.04
9.0	.29	.21	.15	.27	.19	.14	.22	.16	.11	.17	.12	.09	.13	.09	.06	.04
10.0	.27	.19	.13	.24	.17	.12	.20	.14	.10	.16	.11	.07	.12	.08	.05	.03



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:KAR  
Test Date:28 JUL 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity:65.0%  
Test Distance:8.100m [K=1.0000]  
Remarks: OB200c-80W-3000K #1

## WEC AND CCEC

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.443	.252	.080	.421	.240	.076	.379	.217	.069	.340	.196	.063	.305	.177	.057		
2.0	.364	.200	.061	.344	.189	.058	.306	.170	.053	.270	.152	.047	.237	.134	.042		
3.0	.315	.167	.050	.296	.159	.048	.261	.141	.043	.228	.125	.038	.198	.110	.034		
4.0	.278	.145	.042	.261	.137	.040	.229	.121	.036	.199	.107	.032	.171	.093	.028		
5.0	.250	.127	.037	.234	.120	.035	.204	.106	.031	.177	.093	.028	.151	.081	.024		
6.0	.226	.113	.032	.212	.107	.031	.185	.095	.028	.159	.083	.024	.135	.071	.021		
7.0	.207	.102	.029	.194	.097	.028	.169	.085	.025	.145	.074	.022	.123	.064	.019		
8.0	.191	.093	.026	.179	.088	.025	.155	.078	.022	.133	.067	.019	.112	.058	.017		
9.0	.177	.086	.024	.166	.081	.023	.144	.071	.020	.123	.062	.018	.104	.053	.015		
10.0	.165	.079	.022	.154	.075	.021	.134	.066	.018	.115	.057	.016	.096	.048	.014		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.568	.568	.568	.485	.485	.485	.331	.331	.331	.190	.190	.190	.061	.061	.061	
1.0	.570	.536	.504	.488	.460	.434	.334	.316	.300	.192	.183	.175	.062	.059	.056	
2.0	.565	.515	.472	.484	.443	.408	.332	.307	.285	.191	.178	.167	.061	.058	.054	
3.0	.558	.500	.453	.479	.431	.393	.329	.300	.276	.190	.175	.162	.061	.057	.053	
4.0	.551	.489	.441	.473	.422	.383	.325	.294	.270	.188	.172	.160	.061	.056	.052	
5.0	.543	.480	.433	.467	.415	.376	.321	.290	.266	.186	.170	.158	.060	.056	.052	
6.0	.536	.472	.427	.461	.409	.372	.318	.286	.263	.184	.168	.156	.060	.055	.052	
7.0	.529	.466	.422	.455	.404	.368	.314	.283	.261	.183	.167	.155	.059	.055	.051	
8.0	.522	.461	.419	.450	.400	.366	.311	.281	.259	.181	.166	.155	.059	.054	.051	
9.0	.516	.457	.417	.445	.396	.363	.308	.279	.258	.179	.165	.154	.058	.054	.051	
10.0	.510	.453	.415	.440	.393	.362	.305	.277	.257	.178	.164	.153	.058	.054	.051	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:KAR  
Test Date:28 JUL 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity:65.0%  
Test Distance:8.100m [K=1.0000]  
Remarks: OB200c-80W-3000K #1

**UGR(Unified Glare Rating) Table**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm										
NAME: OB200c-80W-3000K					TYPE:LED			WEIGHT:		
SPEC.:80W					DIM.:			SERIAL No.:#1		
MFR.: ICEPIPE					SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	20.3	21.5	21.2	22.4	23.5	20.3	21.5	21.2	22.4	23.5
3H	24.0	25.0	24.8	25.9	27.1	24.0	25.0	24.9	25.9	27.1
4H	26.0	26.9	26.9	27.9	29.1	26.0	27.0	26.9	27.9	29.1
6H	28.1	29.1	29.1	30.0	31.2	28.2	29.1	29.1	30.0	31.3
8H	29.4	30.2	30.3	31.2	32.4	29.4	30.3	30.3	31.2	32.5
12H	30.7	31.6	31.6	32.5	33.8	30.7	31.6	31.7	32.6	33.8
4H 2H	21.5	22.5	22.4	23.4	24.6	21.5	22.5	22.4	23.4	24.6
3H	25.2	26.0	26.1	27.0	28.2	25.2	26.0	26.1	27.0	28.2
4H	27.3	28.0	28.2	29.0	30.3	27.3	28.1	28.2	29.0	30.3
6H	29.6	30.3	30.5	31.3	32.6	29.6	30.3	30.6	31.3	32.6
8H	30.9	31.5	31.8	32.5	33.8	30.9	31.6	31.9	32.6	33.9
12H	32.3	32.9	33.3	33.9	35.2	32.3	33.0	33.3	34.0	35.3
8H 4H	28.0	28.7	29.0	29.7	31.0	28.0	28.7	29.0	29.7	31.0
6H	30.6	31.2	31.6	32.2	33.5	30.6	31.2	31.6	32.2	33.5
8H	32.1	32.6	33.1	33.6	34.9	32.1	32.6	33.1	33.6	35.0
12H	33.7	34.2	34.7	35.2	36.5	33.8	34.2	34.8	35.2	36.6
12H 4H	28.3	28.9	29.2	29.9	31.2	28.3	28.9	29.2	29.9	31.2
6H	30.9	31.4	31.9	32.5	33.8	31.0	31.5	32.0	32.5	33.8
8H	32.5	33.0	33.5	34.0	35.3	32.5	33.0	33.5	34.0	35.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 12590 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.8)

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:KAR  
Test Date:28 JUL 2020

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity:65.0%  
Test Distance:8.100m [K=1.0000]  
Remarks: OB200c-80W-3000K #1

**UTILIZATION FACTORS TABLE**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

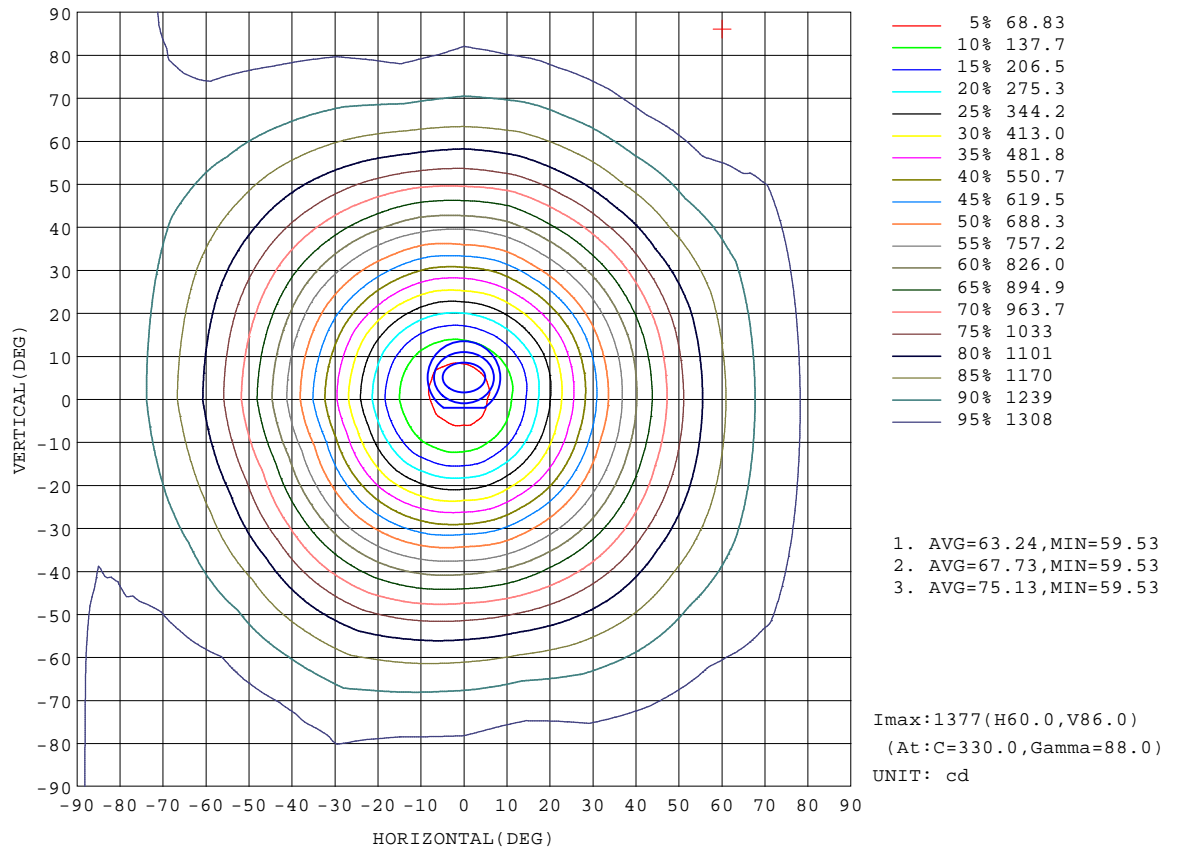
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	33	20	13	31	19	12	28	17	11	4
0.80	42	27	18	39	26	17	34	23	16	6
1.00	49	34	24	45	32	23	39	30	20	9
1.25	56	41	30	52	38	29	44	33	25	12
1.50	61	46	36	56	43	34	48	37	29	14
2.00	69	55	45	64	51	42	54	44	36	18
2.50	74	61	51	69	57	48	58	49	41	21
3.00	79	67	57	72	62	53	61	53	46	24
4.00	84	74	65	77	68	61	65	58	52	28
5.00	88	79	71	81	73	66	68	62	56	31
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**ISOCANDELA DIAGRAM**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



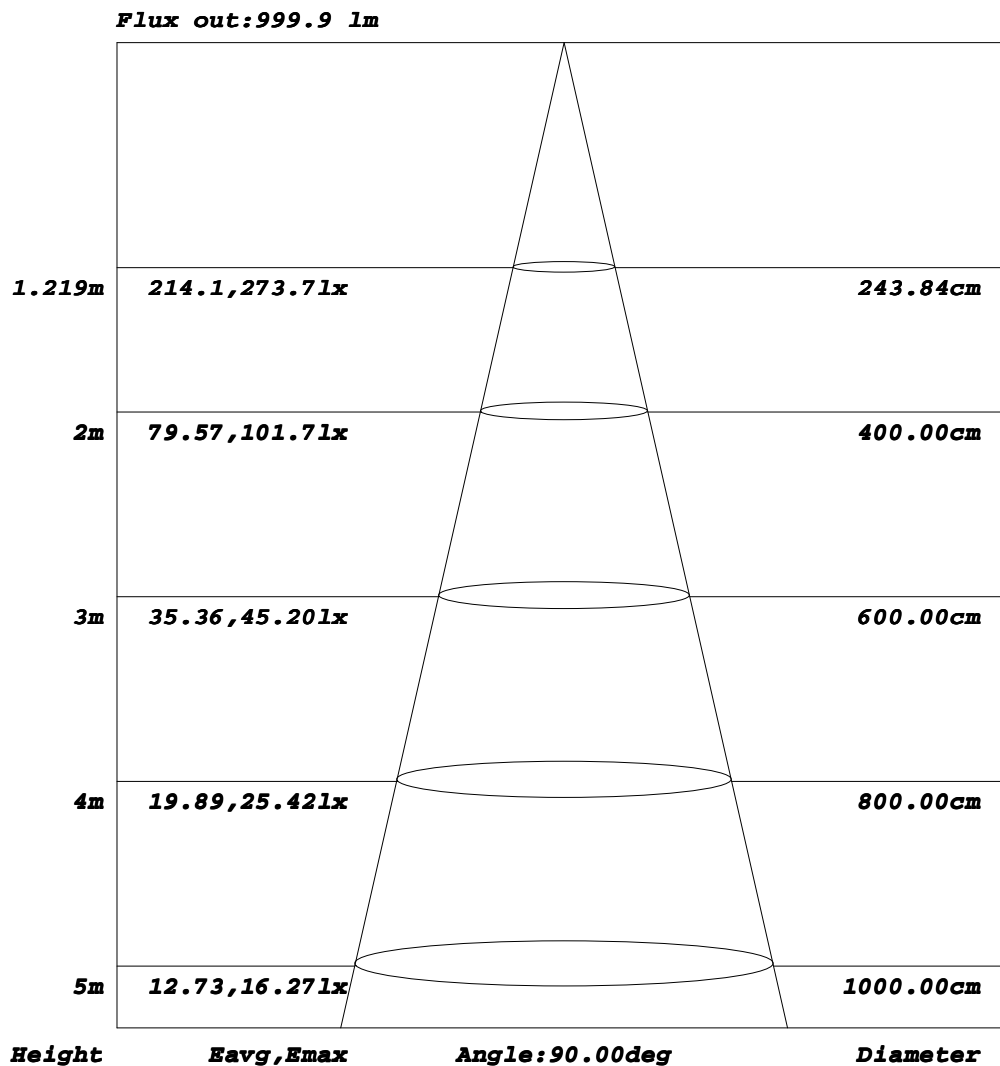
**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**



**AAI Figure**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



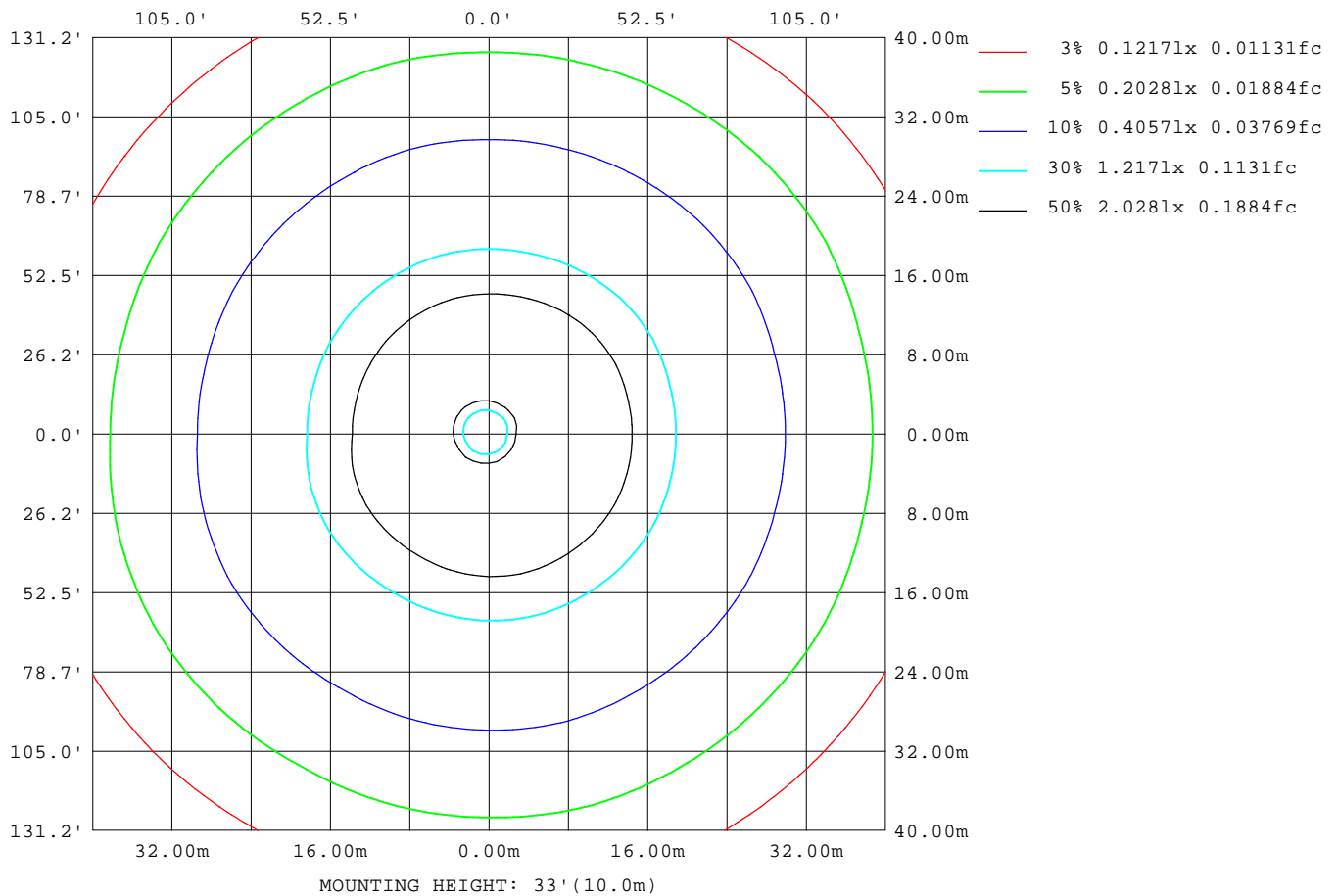
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: KAR**  
**Test Date: 28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**ISOLUX DIAGRAM**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: KAR**  
**Test Date: 28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**LED Avg.L Report**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

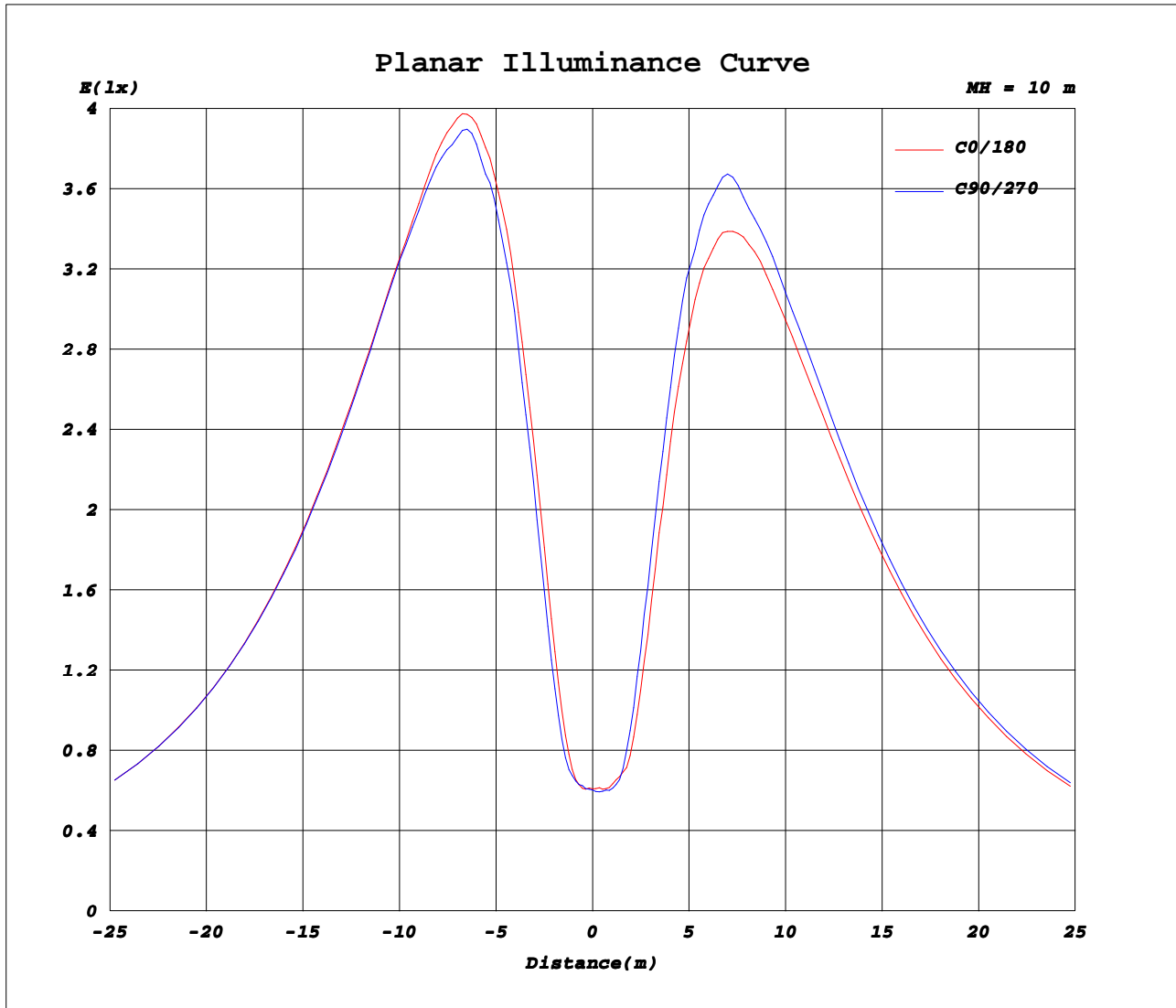
AvgL	cd/m2
L_0~180(65)av	28019
L_0~180(75)av	49037
L_0~180(85)av	150578
L_90~270(65)av	28396
L_90~270(75)av	49524
L_90~270(85)av	151819
L_45(65)av	28702
L_45(75)av	50215
L_45(85)av	154007

Standard: GB/T 29293-2012

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**Planar Illuminance Curve**



**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: KAR**  
**Test Date: 28 JUL 2020**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	60.9	60.8	60.8	60.6	60.5	60.3	60.4	60.2	60.3	60.3	60.2	60.4	60.9	60.8	60.8	60.6	60.5	60.3	60.4
5	66.4	65.7	65.4	64.8	65.6	64.8	65.6	65.2	64.1	64.3	63.3	63.5	62.4	61.8	61.1	60.5	60.8	60.5	60.9
10	119	120	117	115	112	105	102	96.9	91.1	85.6	81.0	79.0	75.0	72.9	72.2	70.5	74.2	78.9	84.0
15	220	223	222	216	212	201	196	185	177	161	156	149	138	135	135	135	143	152	164
20	342	348	344	341	334	323	317	304	293	277	271	262	243	242	238	243	252	263	276
25	469	479	475	470	467	451	449	433	421	404	400	394	367	366	364	371	381	390	409
30	595	607	605	603	600	584	576	559	547	535	529	526	494	491	488	499	510	516	534
35	719	730	726	722	717	705	702	684	671	662	660	662	616	621	620	632	643	646	668
40	822	830	830	827	826	819	811	792	780	775	778	773	731	732	731	745	751	760	768
45	920	932	932	932	927	921	916	896	885	885	887	879	833	836	841	850	860	861	872
50	1014	1019	1025	1023	1020	1017	1007	992	978	984	990	979	932	936	943	952	960	963	973
55	1094	1099	1107	1100	1097	1099	1089	1075	1063	1071	1081	1066	1018	1022	1032	1042	1046	1055	1054
60	1160	1163	1173	1167	1164	1167	1155	1144	1133	1147	1158	1139	1092	1094	1109	1115	1121	1132	1126
65	1215	1216	1229	1224	1221	1225	1212	1203	1192	1211	1220	1202	1154	1158	1172	1178	1181	1192	1189
70	1259	1258	1274	1266	1264	1273	1257	1251	1239	1261	1275	1254	1204	1207	1225	1231	1233	1247	1235
75	1291	1288	1306	1300	1298	1306	1291	1287	1276	1302	1316	1293	1247	1245	1267	1272	1273	1286	1272
80	1316	1311	1329	1321	1318	1332	1315	1312	1304	1331	1345	1320	1276	1276	1300	1303	1303	1316	1302
85	1329	1322	1344	1332	1331	1345	1328	1332	1315	1347	1362	1337	1296	1294	1321	1322	1321	1336	1318
90	1330	1322	1342	1335	1332	1346	1330	1332	1321	1351	1368	1344	1303	1301	1328	1328	1329	1342	1322
95	1321	1313	1332	1325	1322	1337	1321	1328	1314	1346	1364	1338	1301	1298	1326	1327	1325	1339	1318
100	1298	1292	1310	1301	1300	1314	1300	1306	1296	1327	1345	1322	1286	1284	1314	1312	1313	1325	1301
105	1263	1259	1274	1269	1269	1281	1272	1277	1266	1299	1315	1295	1263	1263	1288	1286	1287	1296	1277
110	1222	1216	1229	1228	1224	1238	1229	1235	1228	1260	1274	1257	1224	1226	1252	1251	1252	1259	1238
115	1166	1162	1172	1170	1170	1183	1177	1182	1178	1207	1223	1208	1178	1180	1204	1204	1204	1207	1192
120	1099	1098	1102	1105	1103	1114	1111	1119	1116	1144	1160	1148	1119	1123	1144	1144	1146	1146	1131
125	1024	1022	1025	1026	1028	1036	1036	1043	1043	1071	1085	1077	1049	1055	1073	1073	1074	1074	1060
130	935	935	933	937	937	947	949	955	960	984	999	995	970	974	992	992	992	989	978
135	835	833	831	835	836	844	850	857	865	887	904	900	879	886	898	899	900	893	886
140	723	721	717	720	723	730	737	746	755	777	793	794	776	784	794	795	795	788	781
145	597	595	590	596	600	606	614	626	635	653	669	676	662	667	676	677	676	670	663
150	465	464	461	464	468	474	486	496	506	525	539	546	539	544	549	549	548	540	539
155	336	332	331	334	339	343	351	361	372	390	402	413	410	416	421	420	420	413	405
160	215	213	212	216	219	225	231	241	249	266	276	284	288	290	297	294	294	285	281
165	117	114	115	116	120	124	130	137	143	155	164	170	175	177	184	181	180	173	168
170	48.3	48.3	47.8	48.9	50.7	54.1	57.2	61.5	66.1	73.3	79.1	83.7	90.3	90.0	92.9	90.9	90.3	85.5	81.9
175	16.1	16.1	16.2	16.3	16.7	17.8	19.0	21.4	22.9	26.3	28.2	30.6	33.2	33.6	34.1	32.8	31.2	28.9	26.8
180	16.0	16.1	16.2	16.2	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.1	16.1	16.2	16.2	16.3	16.3	16.3

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Test:U:219.8V I:0.3674A P:79.14W PF:0.9799 Lamp Flux:12590.1x1 lm		
NAME: OB200c-80W-3000K	TYPE:LED	WEIGHT:
SPEC.:80W	DIM.:	SERIAL No.:#1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEG) γ (DEG)	285	300	315	330	345														
0	60.2	60.3	60.3	60.2	60.4														
5	61.6	62.1	62.2	63.2	64.0														
10	87.6	93.0	97.4	103	108														
15	172	179	186	193	204														
20	288	298	306	310	325														
25	416	433	440	444	458														
30	542	562	570	575	584														
35	672	698	707	710	714														
40	779	803	816	818	816														
45	879	907	924	924	918														
50	979	1006	1023	1025	1015														
55	1065	1088	1111	1113	1094														
60	1135	1158	1181	1183	1161														
65	1192	1218	1239	1242	1217														
70	1242	1262	1287	1291	1259														
75	1282	1298	1324	1331	1295														
80	1310	1325	1351	1358	1318														
85	1328	1341	1368	1372	1331														
90	1331	1345	1368	1376	1330														
95	1326	1338	1365	1370	1325														
100	1306	1317	1343	1347	1306														
105	1280	1291	1313	1317	1276														
110	1239	1251	1270	1276	1233														
115	1188	1202	1216	1222	1180														
120	1127	1139	1151	1153	1116														
125	1053	1067	1074	1073	1043														
130	970	981	985	982	956														
135	875	884	886	877	858														
140	770	774	772	764	746														
145	650	654	647	636	621														
150	526	523	513	499	487														
155	393	390	381	369	353														
160	272	265	256	245	232														
165	161	156	145	137	129														
170	76.3	72.8	65.9	60.9	54.4														
175	23.8	20.7	17.3	16.3	16.3														
180	16.3	16.3	16.3	16.3	16.3														

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:KAR**  
**Test Date:28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

## Photometric Data Table [cd]

G/C	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	60.91	60.84	60.77	60.63	60.53	60.33	60.37	60.22	60.27	60.25
3.0	61.47	61.38	61.77	61.52	60.99	61.54	62.85	62.38	62.00	61.56
6.0	71.92	72.91	71.24	69.40	69.45	67.74	68.73	67.73	66.86	66.74
9.0	103.5	104.4	103.3	99.62	97.11	91.31	88.76	84.81	79.49	75.85
12.0	155.7	157.7	154.9	150.4	147.8	139.1	133.8	125.2	119.0	110.9
15.0	220.3	223.4	221.8	216.0	212.0	201.0	195.9	185.0	176.6	160.9
18.0	291.8	295.8	294.6	288.3	283.6	272.7	268.6	255.8	245.2	226.6
21.0	366.9	377.2	371.1	366.7	362.2	350.0	345.6	329.9	317.6	301.4
24.0	445.7	455.4	448.9	444.0	441.1	425.7	423.9	407.4	394.1	376.6
27.0	519.1	529.5	526.6	520.4	517.8	502.9	502.4	484.6	471.1	456.4
30.0	595.0	606.6	605.0	602.8	600.0	583.9	576.4	559.3	547.2	535.0
33.0	673.4	689.6	682.6	678.8	671.9	659.1	660.7	637.8	624.0	614.7
36.0	739.2	746.0	747.8	743.4	739.0	726.4	721.3	707.4	693.7	684.8
39.0	803.5	809.1	810.9	805.2	803.3	797.1	790.2	772.3	758.8	752.5
42.0	859.1	869.2	872.3	871.3	868.6	859.3	850.7	834.6	823.8	820.0
45.0	919.8	932.3	931.8	931.6	927.2	921.5	916.4	896.3	884.8	885.3
48.0	977.3	988.2	989.0	985.3	984.3	979.6	973.9	956.1	943.3	943.5
51.0	1030	1036	1043	1040	1036	1033	1025	1010	997.8	1003
54.0	1079	1083	1092	1085	1083	1084	1073	1060	1047	1056
57.0	1121	1124	1133	1130	1127	1126	1114	1105	1093	1102
60.0	1160	1163	1173	1167	1164	1167	1155	1144	1133	1147
63.0	1193	1198	1206	1203	1199	1202	1191	1182	1170	1184
66.0	1223	1226	1240	1233	1230	1237	1221	1213	1202	1219
69.0	1249	1250	1266	1259	1257	1263	1249	1241	1232	1252
72.0	1273	1273	1288	1282	1277	1289	1273	1267	1257	1278
75.0	1291	1288	1306	1300	1298	1306	1291	1287	1276	1302
78.0	1307	1306	1323	1314	1311	1324	1307	1304	1293	1319
81.0	1319	1314	1335	1324	1323	1336	1319	1317	1306	1336
84.0	1328	1322	1342	1333	1329	1345	1325	1330	1315	1345
87.0	1329	1323	1343	1334	1332	1345	1330	1331	1319	1350
90.0	1330	1322	1342	1335	1332	1346	1330	1332	1321	1351
93.0	1326	1320	1339	1330	1327	1343	1325	1331	1319	1350
96.0	1319	1310	1329	1321	1319	1334	1319	1325	1312	1343
99.0	1303	1297	1314	1307	1306	1320	1305	1310	1299	1332
102.0	1286	1282	1298	1290	1288	1301	1290	1294	1287	1317
105.0	1263	1259	1274	1269	1269	1281	1272	1277	1266	1299
108.0	1238	1236	1249	1244	1242	1257	1246	1252	1245	1274
111.0	1212	1206	1219	1216	1214	1229	1220	1225	1219	1249
114.0	1177	1175	1186	1184	1183	1196	1188	1196	1188	1219
117.0	1142	1138	1147	1145	1144	1157	1151	1159	1153	1184
120.0	1099	1098	1102	1105	1103	1114	1111	1119	1116	1144
123.0	1057	1053	1057	1059	1059	1069	1067	1073	1073	1101
126.0	1006	1006	1007	1011	1009	1019	1019	1028	1028	1054
129.0	952.6	953.5	953.0	956.8	956.5	964.1	968.0	975.6	978.2	1003
132.0	897.5	897.8	895.2	898.8	898.7	906.5	910.7	918.1	923.4	946.7
135.0	835.2	833.4	831.3	835.2	836.0	844.2	849.6	856.9	864.7	887.1
138.0	769.7	766.7	763.2	767.7	769.8	776.6	784.8	791.9	800.8	822.7
141.0	700.8	695.9	692.1	696.4	698.4	705.7	713.7	722.1	732.1	754.4
144.0	623.3	619.7	614.9	621.6	624.0	632.1	639.6	649.7	658.9	679.7
147.0	542.3	542.0	538.5	545.3	548.7	554.7	564.1	574.6	583.8	602.6
150.0	464.8	463.8	460.6	463.6	468.2	474.3	486.0	495.9	506.4	525.2
153.0	387.7	383.4	381.6	384.9	387.9	394.3	403.0	412.9	424.7	444.1
156.0	310.1	307.0	306.0	309.1	313.2	317.7	326.4	337.2	345.8	363.9
159.0	239.5	238.0	234.9	237.4	241.1	247.7	255.7	264.8	273.0	288.3
162.0	173.7	171.2	169.2	171.2	175.2	180.7	186.0	195.9	202.1	217.8
165.0	117.1	114.4	114.7	115.7	119.8	124.4	130.3	137.5	142.7	155.1
168.0	71.60	70.19	70.47	71.21	73.76	77.64	82.84	87.92	92.61	101.0
171.0	39.47	39.48	39.16	39.80	41.65	44.68	47.12	51.18	55.09	61.23
174.0	22.20	21.61	21.41	21.68	22.21	23.95	25.57	27.93	30.31	33.79
177.0	16.01	16.06	16.14	16.18	16.22	16.24	16.25	16.24	16.25	16.27
180.0	16.04	16.10	16.18	16.23	16.27	16.27	16.28	16.25	16.28	16.29
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	60.23	60.35	60.91	60.84	60.77	60.63	60.53	60.33	60.37	60.22
3.0	61.47	61.11	61.04	60.79	60.70	60.56	60.09	60.16	60.01	59.96
6.0	65.45	64.96	64.56	63.77	61.90	61.19	62.04	61.45	62.33	62.95
9.0	73.42	74.08	71.98	69.86	69.70	67.27	69.29	69.98	74.01	77.64
12.0	105.8	101.3	92.65	90.43	89.55	90.05	95.39	99.93	108.4	115.5
15.0	156.1	148.9	138.0	135.3	134.6	134.7	143.2	151.9	164.0	171.7
18.0	222.7	212.3	198.3	197.1	192.8	195.9	204.9	216.8	228.7	240.7
21.0	296.2	287.2	267.3	265.0	262.1	268.1	276.8	287.3	302.1	312.4
24.0	372.4	368.9	342.8	340.4	338.3	344.9	354.1	362.5	381.0	389.2
27.0	451.3	448.2	416.8	417.6	411.8	421.1	432.7	436.8	456.5	466.3
30.0	529.4	525.7	493.5	491.4	487.9	499.2	509.8	516.3	534.3	541.7

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: KAR  
Test Date: 28 JUL 2020

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity: 65.0%  
Test Distance: 8.100m [K=1.0000]  
Remarks: OB200c-80W-3000K #1

**Photometric Data Table [cd]**

33.0	611.5	609.3	567.9	571.2	570.6	581.9	587.6	592.6	612.9	620.6
36.0	684.0	682.6	639.7	644.2	642.6	652.5	667.7	668.8	690.7	696.1
39.0	754.2	750.3	707.8	710.1	709.7	721.6	730.0	737.8	746.2	760.0
42.0	821.6	816.0	772.8	775.2	775.0	786.2	794.9	801.3	813.1	820.0
45.0	886.9	879.1	833.2	836.4	841.3	850.1	860.0	861.4	871.8	879.0
48.0	950.8	942.5	892.6	897.9	902.2	913.6	921.4	923.5	935.1	939.8
51.0	1008	997.1	949.2	955.4	960.4	971.8	977.6	982.4	990.5	996.6
54.0	1065	1048	1001	1006	1015	1025	1029	1036	1038	1050
57.0	1113	1097	1050	1053	1065	1073	1077	1088	1086	1094
60.0	1158	1139	1092	1094	1109	1115	1121	1132	1126	1135
63.0	1197	1178	1131	1133	1148	1154	1159	1168	1166	1172
66.0	1234	1214	1164	1169	1183	1189	1194	1202	1199	1203
69.0	1266	1243	1194	1199	1216	1223	1225	1235	1226	1232
72.0	1294	1270	1224	1224	1242	1248	1250	1262	1250	1258
75.0	1316	1293	1247	1245	1267	1272	1273	1286	1272	1282
78.0	1335	1311	1266	1265	1289	1290	1292	1306	1291	1300
81.0	1350	1324	1281	1280	1304	1308	1308	1321	1304	1313
84.0	1360	1334	1294	1292	1318	1320	1320	1333	1314	1325
87.0	1367	1340	1300	1296	1327	1328	1326	1341	1321	1330
90.0	1368	1344	1303	1301	1328	1328	1329	1342	1322	1331
93.0	1368	1341	1302	1299	1328	1329	1329	1341	1321	1327
96.0	1363	1335	1299	1297	1326	1325	1324	1337	1316	1323
99.0	1351	1327	1290	1289	1318	1316	1315	1329	1306	1311
102.0	1336	1313	1277	1277	1304	1305	1302	1314	1293	1297
105.0	1315	1295	1263	1263	1288	1286	1287	1296	1277	1280
108.0	1293	1273	1241	1242	1267	1268	1267	1274	1255	1256
111.0	1267	1248	1216	1217	1243	1243	1243	1251	1229	1229
114.0	1234	1219	1187	1190	1216	1217	1213	1218	1202	1200
117.0	1201	1186	1157	1159	1182	1182	1181	1185	1169	1164
120.0	1160	1148	1119	1123	1144	1144	1146	1146	1131	1127
123.0	1116	1108	1079	1085	1105	1104	1102	1105	1091	1083
126.0	1070	1062	1035	1040	1059	1059	1059	1058	1045	1038
129.0	1018	1011	985.8	992.3	1008	1010	1010	1008	995.6	988.2
132.0	961.8	958.3	935.4	939.5	954.0	957.6	957.5	952.4	942.3	932.5
135.0	903.5	900.5	879.0	885.7	898.2	899.3	900.4	892.7	886.5	874.8
138.0	837.1	838.8	817.6	824.5	836.8	836.2	839.1	831.0	824.1	812.3
141.0	768.8	769.4	753.6	761.8	772.5	770.6	772.7	763.3	758.6	746.2
144.0	694.4	700.3	685.9	691.1	700.6	701.2	700.2	694.0	688.7	675.3
147.0	617.5	624.6	613.0	618.3	626.3	625.9	625.3	620.3	614.0	602.2
150.0	538.8	546.4	539.4	543.8	549.0	548.7	548.3	539.9	538.5	525.6
153.0	459.2	468.3	462.6	467.8	472.9	470.8	471.1	462.0	458.5	446.8
156.0	377.0	385.2	384.5	388.9	395.0	395.4	394.5	387.9	379.6	367.2
159.0	302.0	307.3	310.0	313.7	320.0	319.2	317.6	310.6	306.0	295.7
162.0	227.1	236.2	242.2	244.4	250.2	247.0	248.1	240.7	233.0	222.6
165.0	163.7	169.7	175.2	176.6	184.1	181.2	180.0	172.8	168.1	161.1
168.0	109.1	113.8	122.1	124.8	125.7	123.8	121.4	117.1	113.5	105.5
171.0	66.06	70.13	77.47	77.82	78.80	77.07	75.49	71.62	68.20	63.48
174.0	36.64	39.12	43.50	43.97	44.44	43.08	41.65	38.98	37.27	33.23
177.0	16.29	16.29	16.02	16.09	16.16	16.22	16.24	16.24	16.22	16.22
180.0	16.29	16.29	16.05	16.11	16.17	16.25	16.27	16.27	16.28	16.28
G/C	300.0	315.0	330.0	345.0						
0.0	60.27	60.25	60.23	60.35						
3.0	60.68	61.30	61.46	61.78						
6.0	64.39	63.94	66.26	67.43						
9.0	81.95	85.53	90.29	94.48						
12.0	121.5	127.8	134.3	141.8						
15.0	179.2	186.2	192.8	204.3						
18.0	248.5	256.8	261.0	275.8						
21.0	322.5	331.6	338.8	351.4						
24.0	404.7	414.2	419.7	432.4						
27.0	483.0	491.5	495.1	505.6						
30.0	562.4	570.3	574.7	584.1						
33.0	645.0	658.7	659.5	667.8						
36.0	718.2	728.3	730.6	733.7						
39.0	781.8	794.5	794.2	794.8						
42.0	844.9	857.7	860.1	857.6						
45.0	907.0	923.6	924.4	918.5						
48.0	965.7	981.8	985.9	978.6						
51.0	1024	1041	1043	1032						
54.0	1072	1092	1098	1078						
57.0	1118	1138	1142	1121						
60.0	1158	1181	1183	1161						
63.0	1195	1218	1221	1197						
66.0	1226	1252	1254	1225						

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: KAR**  
**Test Date: 28 JUL 2020**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**



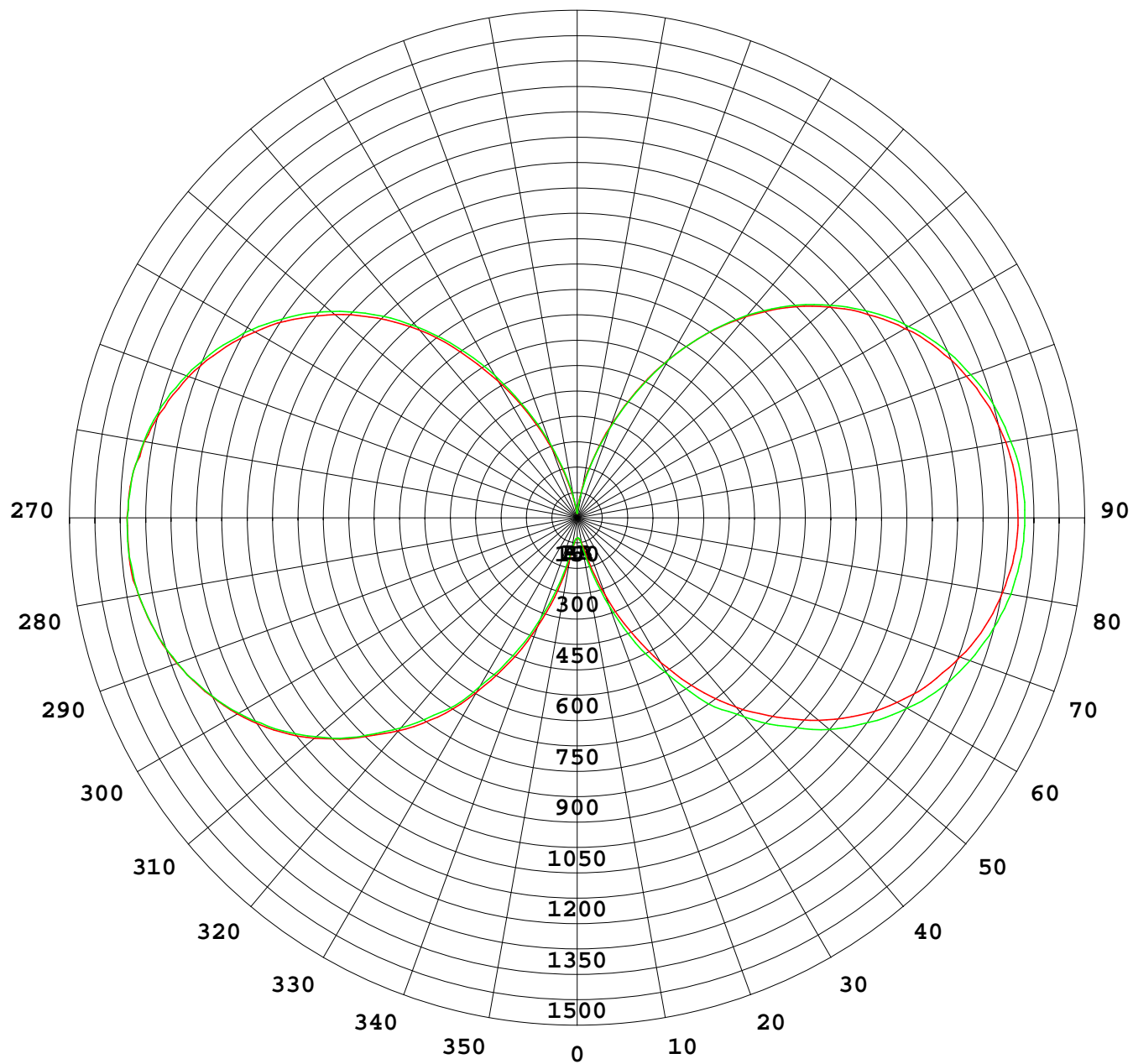
**Photometric Data Table [cd]**

69.0	1253	1277	1284	1252
72.0	1279	1303	1310	1275
75.0	1298	1324	1331	1295
78.0	1316	1343	1347	1310
81.0	1331	1355	1361	1320
84.0	1338	1366	1371	1330
87.0	1341	1370	1376	1335
90.0	1345	1368	1376	1330
93.0	1342	1368	1372	1327
96.0	1335	1361	1366	1322
99.0	1324	1347	1355	1311
102.0	1310	1331	1337	1294
105.0	1291	1313	1317	1276
108.0	1269	1289	1295	1253
111.0	1245	1260	1265	1225
114.0	1213	1229	1231	1193
117.0	1180	1192	1196	1155
120.0	1139	1151	1153	1116
123.0	1097	1106	1107	1073
126.0	1049	1057	1056	1026
129.0	999.1	1004	1002	973.2
132.0	942.8	946.5	940.6	917.9
135.0	883.9	885.6	877.3	857.9
138.0	819.9	818.3	810.8	791.9
141.0	751.1	746.7	738.5	722.0
144.0	680.5	672.2	662.4	647.3
147.0	602.7	594.8	581.9	565.3
150.0	523.4	513.0	499.3	487.3
153.0	441.6	432.3	421.1	409.7
156.0	365.7	353.4	340.9	327.4
159.0	290.2	279.6	268.2	258.0
162.0	219.0	206.6	197.7	186.9
165.0	155.6	145.0	136.7	128.6
168.0	102.5	93.60	86.69	79.96
171.0	60.46	54.94	50.37	43.51
174.0	29.30	25.10	23.27	22.15
177.0	16.23	16.23	16.22	16.20
180.0	16.27	16.30	16.30	16.30

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: KAR**  
**Test Date: 28 JUL 2020**

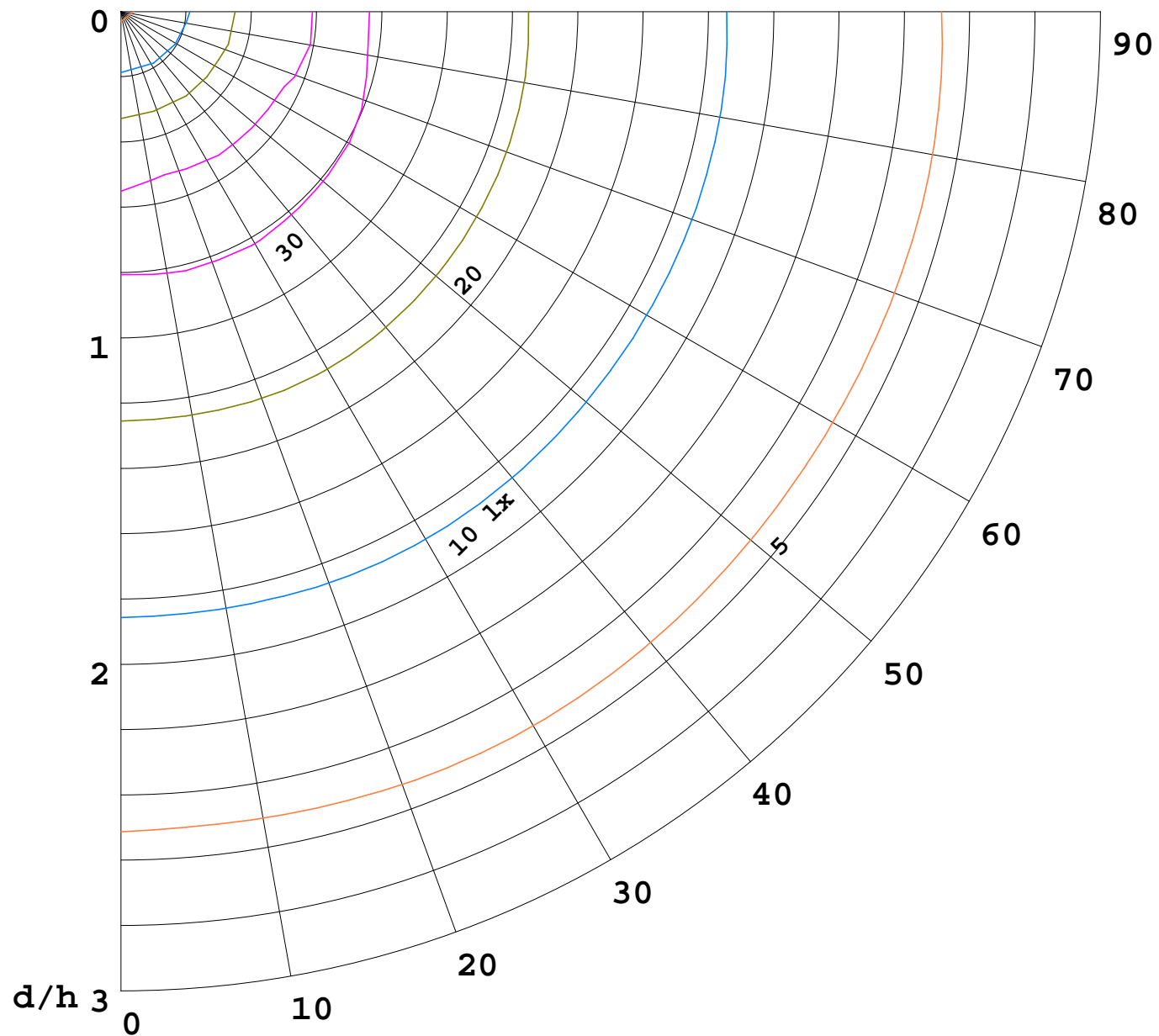
**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.100m [K=1.0000]**  
**Remarks: OB200c-80W-3000K #1**

I(cd)



1000 lm

$K = 1$



**F** = 1000 lm  
**K** = 0.7  
**Hcc** = 0.8 m  
**Hfc** = 0.0 m  
**Eave** = 100 lx

	<b>Pcc</b>	<b>Pw</b>	<b>Pfc</b>
—————	<b>70</b>	<b>50</b>	<b>30</b>
—————	<b>50</b>	<b>30</b>	<b>20</b>

