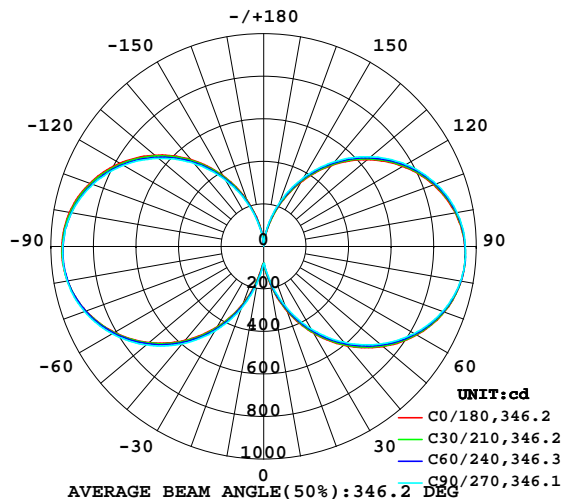


LUMINAIRE PHOTOMETRIC TEST REPORT

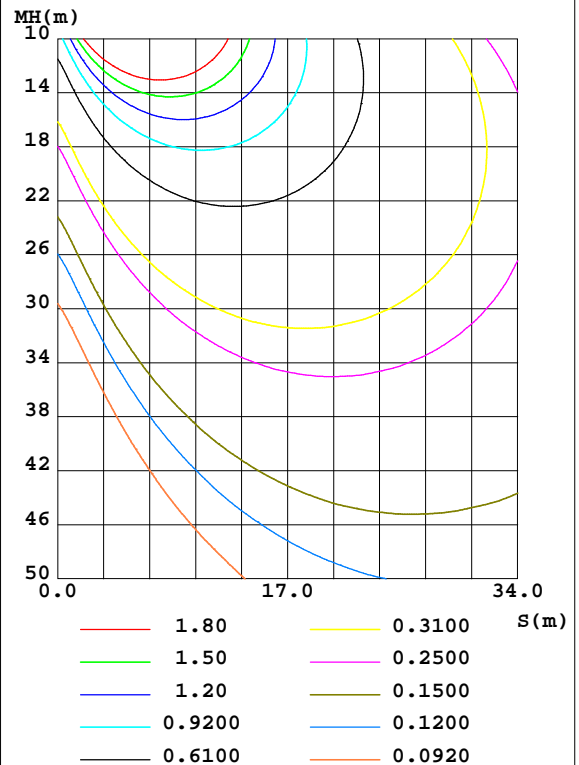
Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.71 lm/W			
MODEL	OB200-60W-57K	Imax(cd)	955.0	S/MH(C0/180)	4.84
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	4.87
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	8996.0	η UP,DN(C0-180)	24.2,25.9
NOMINAL FLUX(lm)	8996.02	CIE CLASS	DIFFUSE	η UP,DN(C180-360)	24.0,25.9
LAMPS INSIDE	1	η up(%)	48.2	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	220	η down(%)	51.8	CIBSE SHR MAX	1.75

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:HSO
 Test Date:23 May 2023

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: OB200-60W-57K

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	179.0	169.1	157.7	146.4	146.0	156.2	167.6	179.2	0- 10	12.03	12.03	0.13,0.13
20	323.7	313.2	299.0	286.4	285.7	297.0	310.6	324.2	10- 20	68.00	80.03	0.89,0.89
30	472.2	462.8	448.3	437.0	434.8	446.1	459.0	473.2	20- 30	178.0	258.0	2.87,2.87
40	610.6	601.8	588.7	579.2	576.8	585.4	598.1	612.0	30- 40	331.8	589.8	6.56,6.56
50	732.5	725.5	713.8	706.0	703.2	710.0	720.4	732.7	40- 50	510.8	1101	12.2,12.2
60	832.2	827.3	818.2	812.0	809.3	814.5	822.1	833.3	50- 60	693.3	1794	19.9,19.9
70	903.5	901.2	895.3	891.9	888.3	891.7	896.3	904.7	60- 70	855.6	2649	29.5,29.5
80	942.8	943.5	939.6	940.2	938.3	937.4	938.7	943.7	70- 80	974.9	3624	40.3,40.3
90	945.1	948.7	948.0	951.2	948.9	945.7	944.6	947.3	80- 90	1033	4658	51.8,51.8
100	914.8	920.5	923.1	929.0	927.3	921.7	916.7	917.0	90-100	1023	5681	63.1,63.1
110	850.2	856.7	862.5	871.7	870.5	863.3	854.7	852.6	100-110	945.5	6626	73.7,73.7
120	754.7	763.9	771.9	783.2	782.4	773.5	762.8	757.9	110-120	811.6	7438	82.7,82.7
130	635.3	645.7	656.4	668.7	667.9	657.8	645.4	638.3	120-130	640.2	8078	89.8,89.8
140	498.5	510.2	521.2	535.0	534.2	523.5	509.5	500.7	130-140	455.1	8533	94.9,94.9
150	347.7	359.6	372.9	386.5	386.2	374.8	360.4	349.9	140-150	280.1	8813	98,98
160	193.8	206.3	218.7	231.8	232.3	220.6	207.6	195.9	150-160	136.6	8950	99.5,99.5
170	59.80	68.75	79.26	88.23	88.79	80.23	68.63	60.54	160-170	42.14	8992	100,100
180	13.30	13.35	13.36	13.30	13.31	13.35	13.36	13.29	170-180	3.951	8996	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 822.1 lm

%lum = 9.1%

%lamp = 9.1%

Conical surface Flux(120deg): 1793.9 lm

%lum = 19.9%

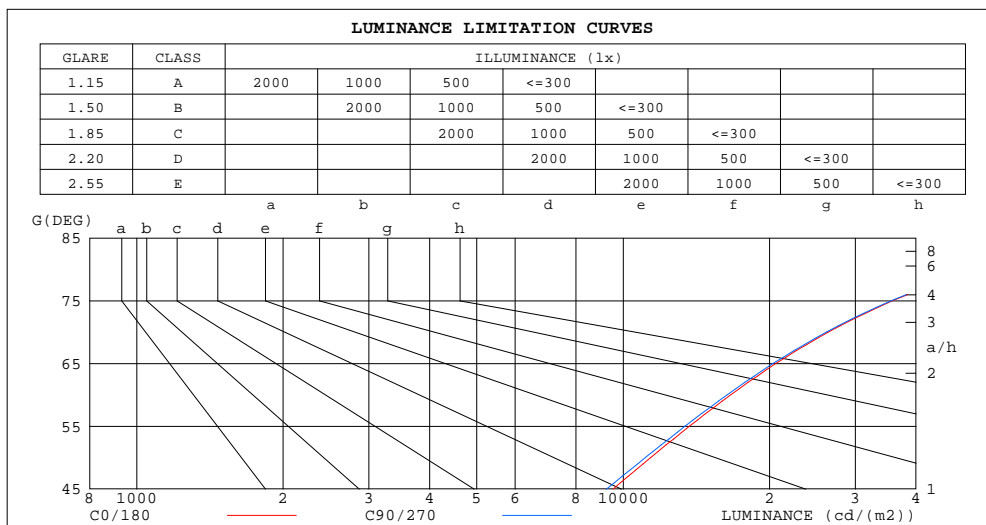
%lamp = 19.9%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:HSO
 Test Date:23 May 2023

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: OB200-60W-57K

LUMINANCE LIMITATION CURVES

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	108851	108908
80	54292	54110
75	35849	35629
70	26417	26178
65	20613	20345
60	16644	16364
55	13694	13410
50	11396	11105
45	9533	9240

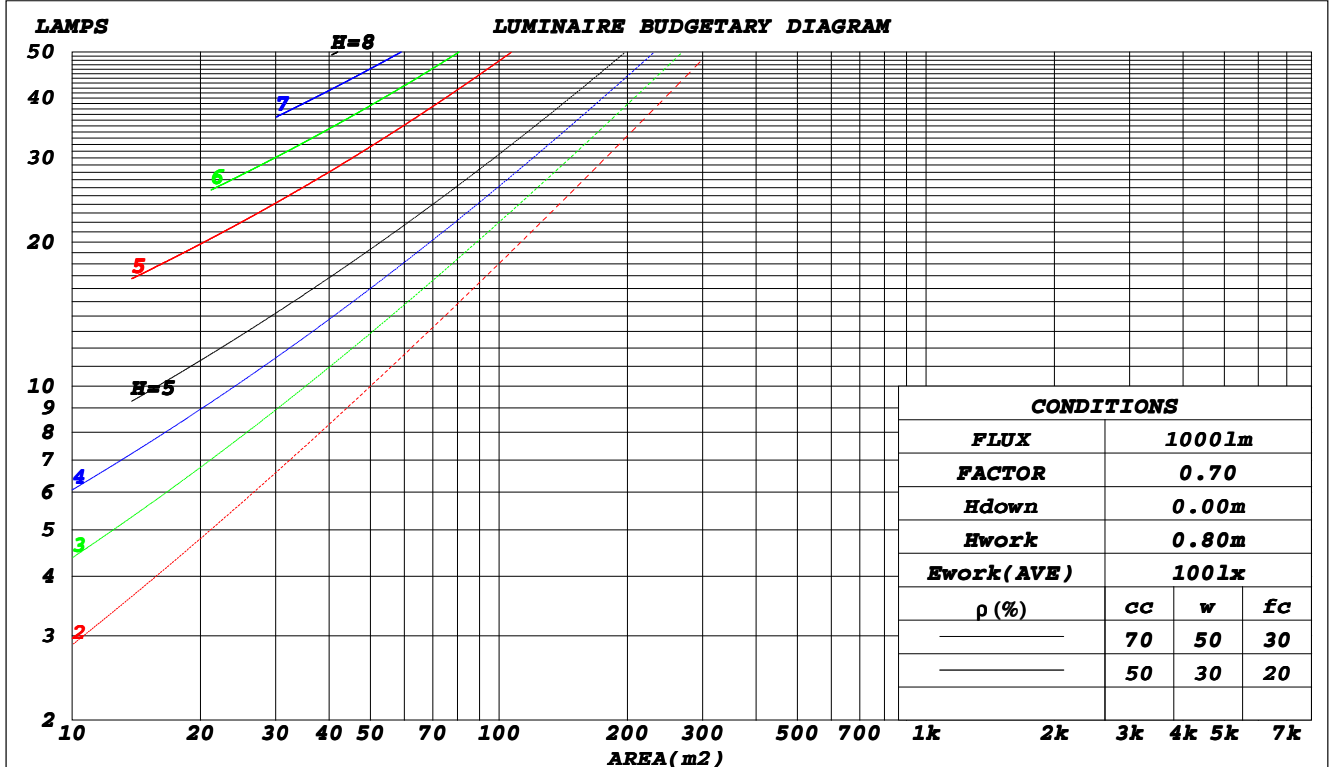
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HSO
Test Date:23 May 2023

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: OB200-60W-57K

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.08	1.08	1.08	.99	.99	.99	.84	.84	.84	.70	.70	.70	.58	.58	.58	.52
1.0	.85	.79	.74	.78	.73	.68	.65	.61	.57	.53	.50	.47	.42	.39	.37	.31
2.0	.71	.63	.56	.65	.58	.51	.54	.48	.43	.43	.39	.35	.33	.30	.27	.22
3.0	.61	.51	.44	.55	.47	.40	.45	.39	.33	.36	.31	.27	.28	.24	.20	.16
4.0	.53	.43	.35	.48	.39	.32	.39	.32	.27	.31	.26	.21	.24	.19	.16	.12
5.0	.46	.36	.29	.42	.33	.27	.34	.27	.22	.27	.22	.17	.21	.16	.13	.09
6.0	.41	.31	.24	.37	.29	.22	.30	.24	.18	.24	.19	.14	.18	.14	.11	.07
7.0	.36	.27	.21	.33	.25	.19	.27	.21	.16	.22	.16	.12	.16	.12	.09	.06
8.0	.33	.24	.18	.30	.22	.16	.25	.18	.13	.20	.14	.10	.15	.11	.08	.05
9.0	.30	.21	.15	.27	.19	.14	.22	.16	.12	.18	.13	.09	.14	.10	.07	.04
10.0	.27	.19	.14	.25	.17	.12	.20	.14	.10	.16	.11	.08	.13	.09	.06	.04



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:HSO
 Test Date:23 May 2023

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: OB200-60W-57K

WEC AND CCEC

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm					
NAME: OB200-60W-57K			TYPE:LED		WEIGHT:
SPEC.:60W-57K			DIM.:		SERIAL No.:
MFR.: ICEPIPE			SUR.:		Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.442	.251	.080	.420	.240	.076	.379	.217	.069	.341	.197	.063	.306	.178	.057		
2.0	.364	.199	.061	.344	.189	.058	.306	.170	.053	.271	.152	.048	.239	.135	.043		
3.0	.314	.167	.050	.296	.158	.048	.261	.142	.043	.229	.126	.039	.200	.111	.034		
4.0	.278	.144	.042	.261	.137	.040	.229	.122	.036	.200	.107	.032	.173	.094	.029		
5.0	.249	.127	.037	.234	.120	.035	.205	.107	.031	.178	.094	.028	.152	.081	.024		
6.0	.226	.113	.032	.212	.107	.031	.185	.095	.028	.160	.083	.024	.137	.072	.021		
7.0	.207	.102	.029	.194	.097	.028	.169	.086	.025	.146	.075	.022	.124	.065	.019		
8.0	.191	.093	.026	.179	.088	.025	.156	.078	.022	.134	.068	.020	.114	.058	.017		
9.0	.177	.086	.024	.166	.081	.023	.144	.071	.020	.124	.062	.018	.105	.053	.015		
10.0	.165	.079	.022	.154	.075	.021	.134	.066	.019	.116	.057	.016	.098	.049	.014		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.558	.558	.558	.477	.477	.477	.325	.325	.325	.187	.187	.187	.060	.060	.060	
1.0	.560	.525	.494	.479	.451	.425	.328	.310	.294	.189	.180	.171	.060	.058	.055	
2.0	.555	.504	.462	.475	.434	.400	.326	.300	.279	.188	.175	.163	.060	.057	.053	
3.0	.548	.490	.443	.470	.422	.384	.322	.293	.269	.186	.171	.159	.060	.056	.052	
4.0	.540	.478	.431	.464	.413	.374	.319	.288	.263	.184	.169	.156	.059	.055	.051	
5.0	.533	.469	.422	.458	.406	.367	.315	.284	.259	.183	.167	.154	.059	.054	.051	
6.0	.526	.462	.416	.452	.400	.363	.312	.280	.257	.181	.165	.152	.058	.054	.050	
7.0	.518	.456	.412	.446	.395	.359	.308	.277	.254	.179	.163	.151	.058	.053	.050	
8.0	.512	.451	.409	.441	.391	.356	.305	.274	.253	.177	.162	.151	.057	.053	.050	
9.0	.506	.446	.406	.436	.387	.354	.302	.272	.252	.176	.161	.150	.057	.053	.050	
10.0	.500	.442	.404	.431	.384	.353	.299	.270	.251	.174	.160	.150	.057	.052	.050	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HSO
Test Date:23 May 2023

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: OB200-60W-57K

UGR(Unified Glare Rating) Table

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm										
NAME: OB200-60W-57K					TYPE:LED			WEIGHT:		
SPEC.:60W-57K					DIM.:			SERIAL No.:		
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	19.2	20.3	20.0	21.2	22.4	19.1	20.3	20.0	21.1	22.3
3H	22.8	23.9	23.7	24.8	25.9	22.8	23.8	23.6	24.7	25.9
4H	24.8	25.8	25.7	26.7	27.9	24.8	25.8	25.7	26.7	27.9
6H	27.0	28.0	27.9	28.9	30.1	27.0	27.9	27.9	28.9	30.1
8H	28.2	29.1	29.1	30.1	31.3	28.2	29.1	29.1	30.0	31.3
12H	29.6	30.5	30.5	31.4	32.6	29.6	30.4	30.5	31.4	32.6
4H 2H	20.3	21.3	21.2	22.2	23.4	20.3	21.3	21.2	22.2	23.4
3H	24.0	24.9	24.9	25.8	27.0	24.0	24.8	24.9	25.8	27.0
4H	26.1	26.9	27.0	27.9	29.1	26.1	26.9	27.0	27.8	29.1
6H	28.4	29.2	29.4	30.1	31.4	28.4	29.1	29.4	30.1	31.4
8H	29.7	30.4	30.7	31.4	32.7	29.7	30.4	30.7	31.4	32.6
12H	31.2	31.8	32.1	32.8	34.1	31.2	31.8	32.1	32.8	34.1
8H 4H	26.9	27.5	27.8	28.5	29.8	26.9	27.5	27.8	28.5	29.8
6H	29.5	30.0	30.4	31.0	32.3	29.4	30.0	30.4	31.0	32.3
8H	30.9	31.4	31.9	32.4	33.8	30.9	31.4	31.9	32.4	33.8
12H	32.6	33.0	33.6	34.1	35.4	32.6	33.0	33.6	34.1	35.4
12H 4H	27.1	27.7	28.1	28.7	30.0	27.1	27.7	28.1	28.7	30.0
6H	29.8	30.3	30.8	31.3	32.6	29.8	30.3	30.8	31.3	32.6
8H	31.4	31.8	32.4	32.8	34.2	31.4	31.8	32.4	32.8	34.2
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 8996 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.6)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HSO
Test Date:23 May 2023

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: OB200-60W-57K

UTILIZATION FACTORS TABLE

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

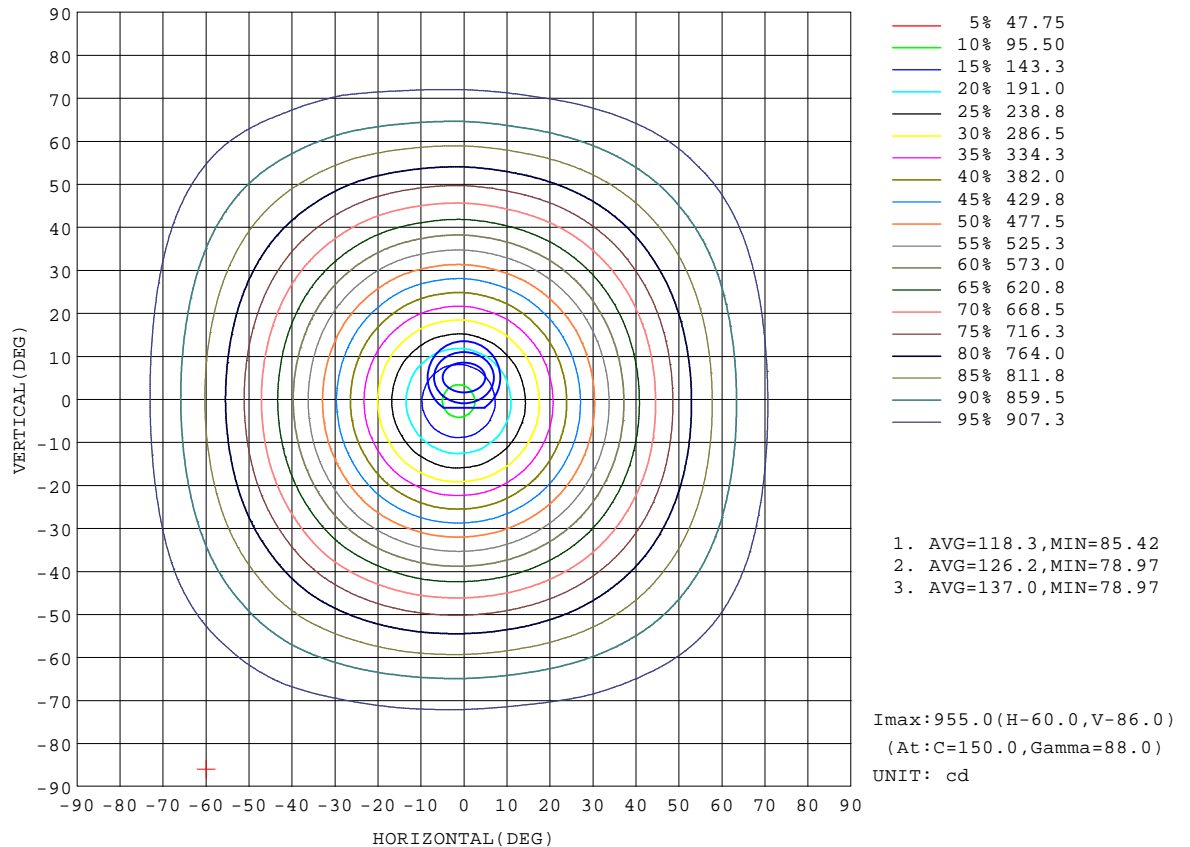
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	34	21	13	32	20	13	29	18	12	4
0.80	42	28	19	40	26	18	35	24	16	7
1.00	49	34	25	46	33	24	40	31	21	10
1.25	56	41	31	52	39	30	45	34	26	13
1.50	62	47	37	57	44	35	49	38	30	15
2.00	70	56	46	64	52	43	55	45	37	20
2.50	75	62	52	69	58	49	59	50	42	23
3.00	79	67	58	73	63	54	62	54	47	25
4.00	85	74	66	78	69	61	66	59	53	29
5.00	88	79	72	81	73	67	69	63	57	32
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:HSO
Test Date:23 May 2023

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: OB200-60W-57K

ISOCANDELA DIAGRAM

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

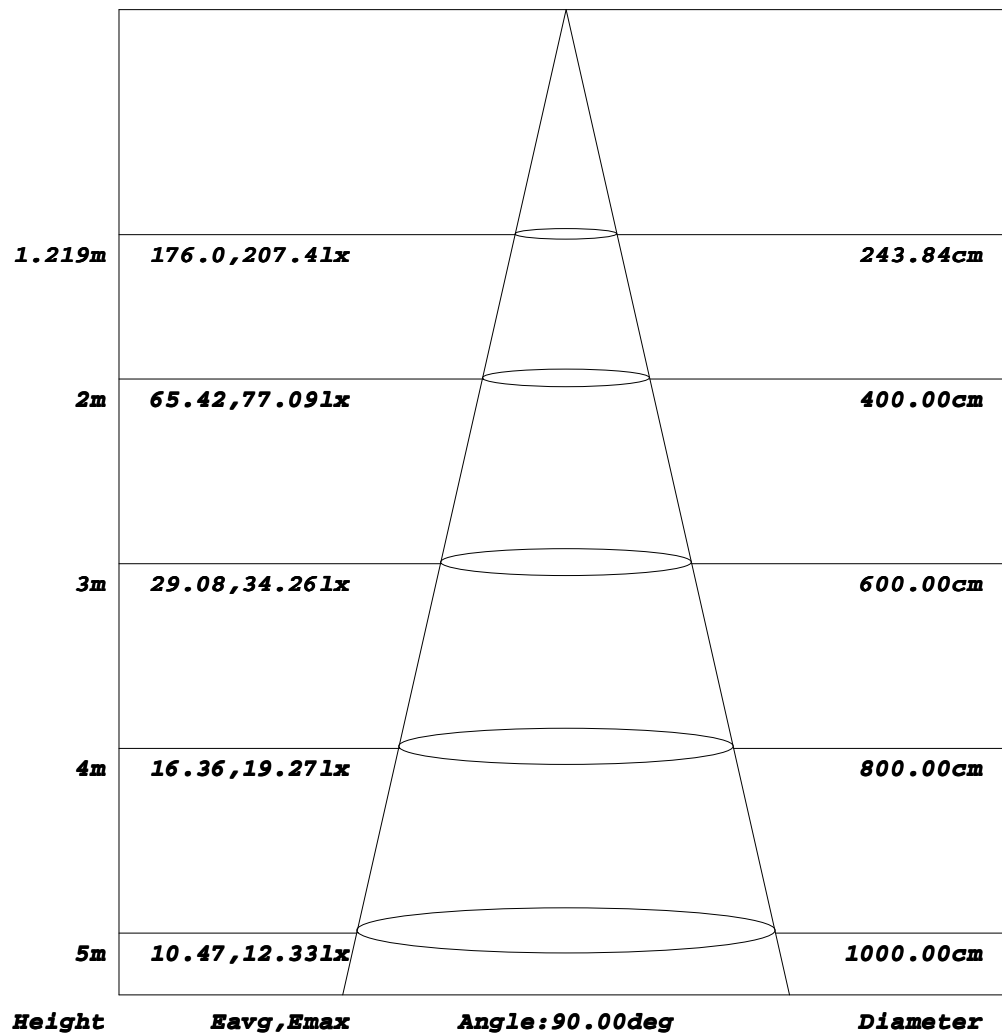


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

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: OB200-60W-57K

AAI Figure

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Flux out:822.1 lm


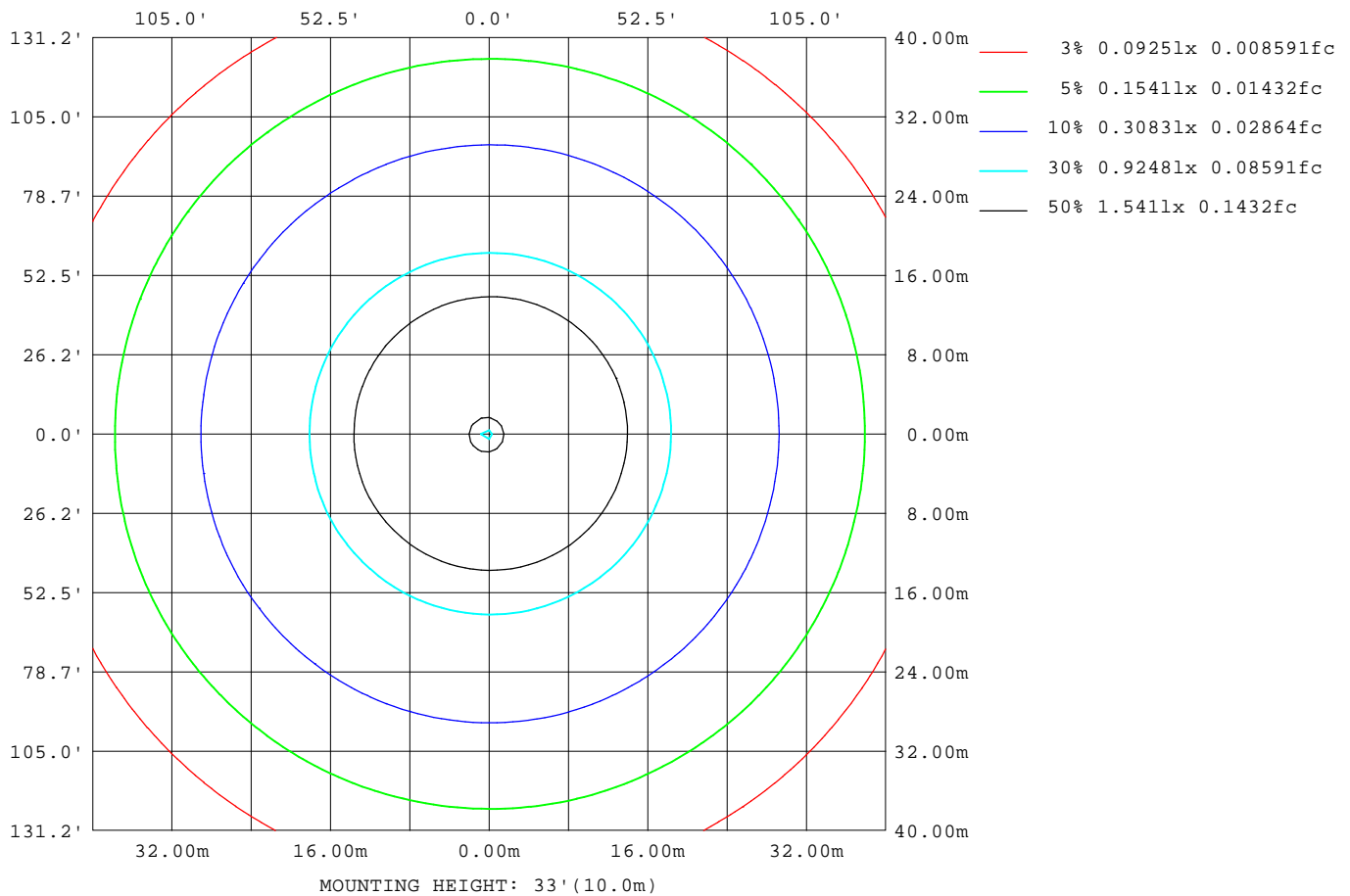
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

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: OB200-60W-57K

ISOLUX DIAGRAM

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

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: OB200-60W-57K

LED Avg.L Report

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

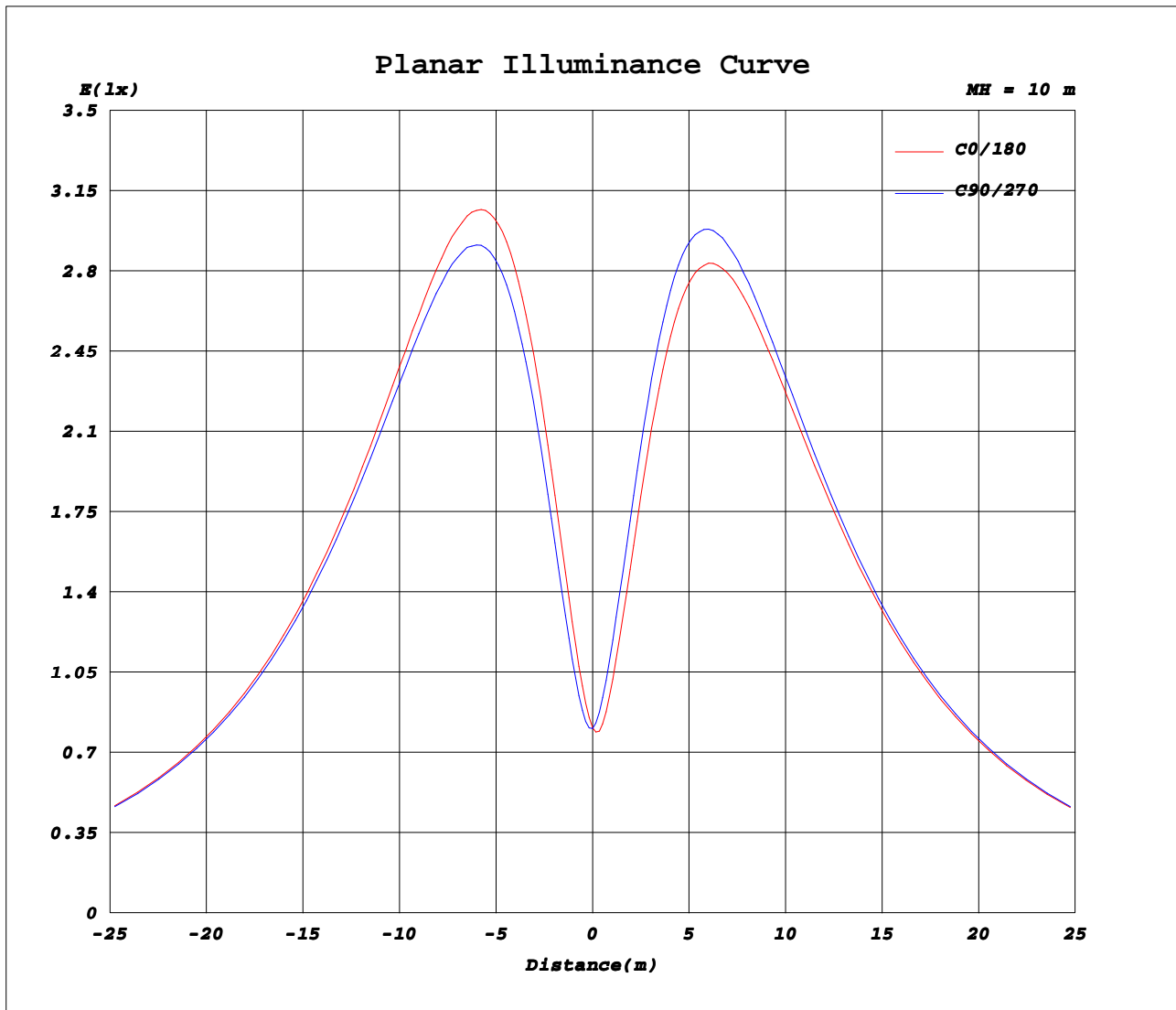
AvgL	cd/m2
L_0~180(65)av	20393
L_0~180(75)av	35635
L_0~180(85)av	108831
L_90~270(65)av	20379
L_90~270(75)av	35625
L_90~270(85)av	108731
L_45(65)av	20427
L_45(75)av	35679
L_45(85)av	108981

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HSO
Test Date:23 May 2023

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: OB200-60W-57K

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

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: OB200-60W-57K

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm																			
NAME: OB200-60W-57K										TYPE:LED					WEIGHT:				
SPEC.:60W-57K										DIM.:					SERIAL No.:				
MFR.: ICEPIPE										SUR.:					Shielding Angle:				

Table--1

UNIT: cd

γ (DEG) \ C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	80.8	80.5	80.6	80.5	80.5	80.5	80.5	80.7	80.6	81.0	80.9	81.3	80.8	80.5	80.6	80.5	80.5	80.5	80.5
5	118	116	115	112	110	106	104	100	98.0	95.7	95.2	94.7	95.5	97.5	99.2	103	105	109	111
10	179	175	174	169	166	161	158	152	150	146	146	145	146	150	151	156	159	165	168
15	250	246	244	239	235	229	226	220	217	213	213	212	212	216	218	224	227	234	237
20	324	320	318	313	309	303	299	293	291	286	287	285	286	289	291	297	300	307	311
25	399	395	393	389	384	378	374	369	366	362	362	360	361	364	366	372	375	381	386
30	472	469	467	463	458	453	448	443	441	437	437	436	435	438	441	446	449	455	459
35	543	540	538	534	529	524	520	516	513	509	510	508	508	510	513	517	520	527	530
40	611	607	606	602	598	593	589	585	583	579	580	578	577	579	581	585	588	595	598
45	674	671	670	666	661	657	653	650	648	645	645	643	642	644	646	651	653	658	661
50	733	729	728	725	721	718	714	710	709	706	707	704	703	704	707	710	712	717	720
55	785	782	781	780	775	773	769	766	764	762	764	760	759	760	762	765	766	772	774
60	832	830	828	827	823	821	818	815	814	812	814	811	809	810	812	814	815	820	822
65	871	869	869	868	865	863	860	858	857	856	858	855	853	852	854	856	857	861	863
70	904	901	902	901	899	898	895	894	893	892	894	891	888	889	890	892	891	895	896
75	928	925	926	927	924	924	922	921	921	920	922	920	917	916	917	919	917	921	922
80	943	941	941	943	941	942	940	940	941	940	943	940	938	935	936	937	935	938	939
85	949	948	949	951	950	951	949	951	951	951	953	950	948	946	946	947	945	946	946
90	945	945	946	949	947	949	948	950	950	951	954	952	949	947	946	946	943	945	945
95	934	934	936	939	938	942	941	943	944	945	947	945	943	940	940	938	936	936	936
100	915	915	917	920	920	923	923	927	928	929	932	930	927	924	923	922	918	918	917
105	886	887	889	893	893	897	897	902	901	905	907	905	903	899	899	896	893	891	890
110	850	851	853	857	858	863	862	867	870	872	874	873	870	867	865	863	859	857	855
115	806	807	809	814	816	821	821	826	829	831	834	833	830	826	824	822	817	815	812
120	755	757	760	764	766	772	772	777	780	783	786	784	782	779	776	773	769	765	763
125	698	700	704	708	710	715	718	723	726	729	731	730	728	724	722	718	713	710	706
130	635	638	641	646	648	655	656	662	666	669	671	670	668	664	662	658	652	649	645
135	569	572	575	580	583	589	591	597	600	604	606	606	603	600	597	592	587	583	580
140	499	502	504	510	513	518	521	528	531	535	537	537	534	530	528	523	518	514	510
145	424	427	431	436	440	445	449	455	457	462	463	464	462	457	455	450	446	441	437
150	348	352	355	360	363	370	373	379	382	386	388	388	386	382	380	375	370	365	360
155	271	274	277	283	286	292	296	302	305	309	310	311	309	305	303	298	293	287	284
160	194	198	200	206	209	216	219	225	227	232	233	234	232	228	226	221	217	211	208
165	122	126	128	133	136	142	145	150	153	157	157	159	157	153	152	146	143	138	134
170	59.8	62.4	64.7	68.7	71.9	76.2	79.3	83.1	85.4	88.2	89.1	90.0	88.8	86.1	83.2	80.2	77.5	73.0	68.6
175	16.8	18.5	19.7	21.7	23.8	26.3	28.0	30.2	30.8	32.5	32.6	32.6	30.2	27.3	25.5	20.9	17.4	15.0	15.8
180	13.3	13.3	13.4	13.4	13.4	13.4	13.4	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.4	13.4	13.4	13.4

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HSO
Test Date:23 May 2023

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: OB200-60W-57K

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.1V I:0.2793A P:59.30W PF:0.9648 Lamp Flux:8996.02x1 lm		
NAME: OB200-60W-57K	TYPE:LED	WEIGHT:
SPEC.:60W-57K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

<div> <div>C(DEG)</div> <div>γ (DEG)</div> </div>	285	300	315	330	345													
0	80.7	80.6	81.0	80.9	81.3													
5	114	116	119	119	120													
10	173	175	179	179	181													
15	243	246	250	250	252													
20	317	320	324	325	326													
25	392	395	399	401	401													
30	466	469	473	474	475													
35	536	540	545	546	545													
40	604	607	612	613	613													
45	668	671	675	677	676													
50	726	729	733	736	734													
55	780	783	786	788	787													
60	827	830	833	835	834													
65	867	870	872	874	873													
70	901	902	905	907	904													
75	925	927	928	932	929													
80	942	943	944	947	944													
85	949	949	951	953	950													
90	946	947	947	950	946													
95	937	936	937	939	936													
100	917	918	917	919	916													
105	889	890	888	891	887													
110	854	853	853	853	850													
115	810	810	808	810	807													
120	760	760	758	759	756													
125	704	703	701	702	698													
130	642	641	638	639	636													
135	576	575	571	572	569													
140	506	504	501	500	498													
145	432	430	426	426	424													
150	356	354	350	349	348													
155	278	276	273	272	270													
160	202	200	196	195	193													
165	129	127	123	122	121													
170	62.7	63.5	60.5	59.8	58.7													
175	14.3	14.1	13.5	13.6	13.5													
180	13.4	13.3	13.3	13.3	13.3													

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HSO
Test Date:23 May 2023

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: OB200-60W-57K

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	80.77	80.45	80.57	80.48	80.52	80.49	80.51	80.66	80.61	80.97
3.0	99.48	98.00	97.07	94.80	93.22	90.57	88.78	86.38	84.85	83.17
6.0	129.1	127.0	125.4	122.0	119.3	115.5	112.7	108.8	106.7	104.1
9.0	165.7	162.4	161.0	156.4	153.8	148.2	145.3	140.9	138.2	134.8
12.0	206.5	202.6	201.1	196.0	193.0	187.0	183.8	178.0	175.8	171.7
15.0	249.7	245.8	244.1	239.0	235.5	229.2	225.5	219.7	217.4	213.1
18.0	293.6	290.2	288.3	283.2	279.4	272.9	269.7	263.6	261.3	256.8
21.0	338.7	335.5	333.1	328.4	324.0	318.1	313.8	308.4	305.7	302.1
24.0	383.9	380.2	378.1	373.6	369.0	363.3	359.3	353.5	350.8	347.2
27.0	428.4	425.2	422.8	418.6	413.9	408.2	404.1	398.9	395.9	392.4
30.0	472.2	468.8	466.9	462.8	458.1	452.7	448.3	443.1	440.8	437.0
33.0	515.3	511.9	509.7	506.2	501.3	496.1	492.0	487.0	484.3	480.6
36.0	557.1	553.5	551.4	547.9	543.3	538.0	534.5	529.9	527.5	523.5
39.0	597.4	594.4	592.3	588.2	584.1	579.1	575.5	571.6	568.8	565.2
42.0	635.9	633.8	631.6	627.3	623.7	619.5	615.6	611.1	609.1	606.0
45.0	674.1	670.6	669.7	666.0	661.3	657.3	653.4	649.8	648.5	645.1
48.0	709.8	706.1	705.2	702.3	697.7	694.3	690.5	686.2	685.3	682.0
51.0	742.8	740.3	739.7	737.3	733.0	728.8	725.5	722.5	720.0	718.3
54.0	775.2	772.9	771.5	769.1	765.0	761.9	758.7	756.0	753.8	751.7
57.0	804.5	802.0	801.5	799.2	795.7	792.4	789.2	787.3	785.2	783.3
60.0	832.2	829.7	828.3	827.3	823.3	821.4	818.2	815.4	814.4	812.0
63.0	856.7	854.2	853.3	852.4	849.5	847.5	843.9	842.4	841.2	839.4
66.0	878.5	875.2	876.1	875.2	872.1	870.5	867.9	866.2	865.3	864.1
69.0	897.8	895.5	896.3	896.1	892.0	891.9	888.3	887.3	886.0	885.5
72.0	915.0	911.7	912.8	913.0	909.3	909.3	906.4	904.9	905.4	904.8
75.0	927.9	925.2	925.9	926.6	923.5	924.3	922.1	920.6	921.2	920.3
78.0	937.3	936.6	936.9	937.3	934.8	935.3	933.6	933.5	933.0	933.3
81.0	945.0	943.9	944.1	945.8	944.0	944.1	943.0	943.5	942.8	943.5
84.0	948.7	946.9	948.0	949.9	948.0	949.5	948.0	949.6	949.2	949.3
87.0	948.2	947.9	947.9	950.6	949.2	951.3	950.3	951.7	952.3	952.0
90.0	945.1	944.7	946.3	948.7	947.3	949.4	948.0	950.3	950.4	951.2
93.0	940.3	939.8	941.4	944.5	943.0	945.5	944.3	947.7	947.4	949.2
96.0	931.5	930.0	933.2	935.3	935.3	937.9	937.2	939.7	941.7	942.6
99.0	918.9	918.7	921.2	924.6	925.1	927.8	926.9	930.3	931.3	933.1
102.0	903.7	904.7	907.3	910.1	909.9	914.2	913.3	917.1	918.7	919.8
105.0	885.8	886.6	888.6	892.5	893.3	897.5	897.0	901.5	901.5	904.6
108.0	864.7	866.2	868.4	872.1	872.7	877.4	878.1	881.8	882.9	885.2
111.0	840.7	843.0	845.5	849.1	849.7	854.6	855.6	860.1	861.7	863.6
114.0	814.7	817.1	819.4	823.7	824.1	829.2	830.0	835.1	837.0	839.1
117.0	785.5	787.7	790.7	794.6	796.2	801.4	802.8	808.1	809.8	812.6
120.0	754.7	757.0	760.0	763.9	766.4	771.7	771.9	777.3	780.4	783.2
123.0	721.4	723.2	726.5	731.4	732.7	738.7	739.9	745.4	748.2	750.9
126.0	685.4	688.1	692.1	695.8	698.2	703.5	705.5	711.1	713.9	716.9
129.0	647.9	651.4	654.0	659.1	661.2	667.2	668.7	674.8	677.7	681.1
132.0	609.3	612.1	615.3	620.6	622.9	628.8	631.3	637.0	639.6	643.4
135.0	568.7	571.8	575.2	580.0	583.0	588.9	591.0	597.0	599.6	604.0
138.0	526.9	529.8	533.0	538.6	540.9	546.8	549.9	555.6	558.1	562.9
141.0	483.7	486.5	490.0	495.3	498.0	504.2	507.5	513.3	516.0	520.3
144.0	439.0	442.7	445.5	451.2	454.5	460.1	462.9	469.5	472.1	476.5
147.0	393.6	397.4	400.5	405.2	409.0	415.4	418.4	424.8	427.7	431.6
150.0	347.7	351.5	354.8	359.6	363.2	369.8	372.9	378.8	381.6	386.5
153.0	301.3	305.0	308.1	313.7	317.3	323.2	326.5	332.6	335.7	339.7
156.0	255.0	259.1	261.6	267.4	270.7	276.9	280.6	286.3	289.1	293.2
159.0	209.0	213.2	215.5	221.4	224.8	231.2	234.2	240.3	242.7	247.4
162.0	164.1	168.4	170.5	176.3	179.4	185.7	188.9	194.6	196.9	201.5
165.0	122.1	125.6	128.2	132.9	136.5	141.8	144.9	150.3	152.6	156.9
168.0	82.92	86.00	88.36	92.78	96.25	101.0	104.4	108.5	111.4	114.5
171.0	49.47	51.80	54.02	57.79	60.68	64.86	67.66	71.25	73.23	76.03
174.0	24.22	26.02	27.49	30.21	32.59	35.66	37.50	40.03	41.34	43.15
177.0	13.22	13.22	13.25	13.27	13.28	13.27	13.28	13.26	13.25	13.21
180.0	13.30	13.33	13.35	13.35	13.36	13.37	13.36	13.35	13.32	13.30
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	80.87	81.27	80.77	80.45	80.57	80.48	80.52	80.49	80.51	80.66
3.0	82.69	82.32	82.93	84.41	85.71	88.18	89.93	92.52	94.31	96.63
6.0	103.5	102.8	103.8	106.1	108.0	111.5	114.2	118.4	121.0	124.8
9.0	134.4	133.7	134.7	137.5	139.7	144.1	146.7	152.3	154.9	160.3
12.0	171.9	170.1	171.3	175.0	176.7	182.3	185.4	191.3	194.5	200.4
15.0	213.2	211.6	212.2	216.3	218.0	223.8	227.0	233.6	236.8	242.9
18.0	257.1	255.1	255.6	259.5	261.7	267.4	270.8	277.3	281.0	287.0
21.0	301.5	300.0	300.6	303.8	306.3	311.7	315.4	321.5	325.5	331.9
24.0	347.2	345.6	345.7	348.7	351.3	356.3	360.2	366.4	370.5	376.9
27.0	392.1	390.4	390.7	394.1	396.1	401.2	404.8	411.0	415.2	421.6
30.0	437.0	435.5	434.8	438.0	440.9	446.1	449.0	455.3	459.0	465.5

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

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: OB200-60W-57K

Photometric Data Table [cd]

33.0	481.2	478.8	478.7	481.5	484.2	489.0	492.1	498.4	502.0	508.5
36.0	524.0	522.0	522.0	524.1	526.2	531.2	533.8	540.6	543.9	550.0
39.0	566.3	564.1	563.2	565.3	567.4	571.9	575.1	581.1	584.9	591.1
42.0	606.5	604.2	603.1	605.3	607.3	612.3	614.7	620.9	623.6	630.3
45.0	645.4	643.0	642.2	643.9	646.3	651.1	652.7	658.3	661.4	668.0
48.0	683.3	680.6	679.4	681.1	682.8	686.9	689.0	694.4	697.7	703.3
51.0	719.2	716.2	714.7	716.0	718.3	721.7	723.3	729.2	731.9	737.2
54.0	752.7	750.3	748.2	749.1	751.0	754.3	756.0	761.2	764.1	769.7
57.0	784.6	782.2	779.8	780.4	782.1	786.0	786.7	791.6	793.7	799.7
60.0	814.0	810.8	809.3	809.6	811.5	814.5	815.0	819.7	822.1	826.9
63.0	840.6	838.3	835.9	836.1	838.0	840.6	840.9	846.3	847.4	852.1
66.0	865.4	862.4	860.4	860.8	861.8	864.4	864.0	869.2	869.7	874.6
69.0	887.7	883.9	882.0	881.8	883.1	884.9	883.8	888.9	890.2	894.5
72.0	906.2	903.1	901.9	900.6	901.7	903.2	902.3	905.9	907.6	910.8
75.0	922.2	919.6	916.7	916.4	917.0	918.6	917.3	920.9	921.9	924.6
78.0	935.7	932.5	930.0	928.7	929.5	930.9	928.9	931.6	932.6	936.3
81.0	944.6	942.5	939.9	938.6	938.9	939.7	937.1	939.9	940.7	943.5
84.0	951.8	949.4	946.3	944.6	944.1	945.2	943.4	944.7	945.1	948.0
87.0	954.4	952.1	949.6	947.3	947.7	947.6	944.8	946.7	946.4	947.7
90.0	954.4	951.8	948.9	946.6	946.1	945.7	943.4	944.9	944.6	945.8
93.0	951.5	948.2	946.5	943.6	943.4	942.7	939.5	940.6	939.3	941.1
96.0	944.4	942.9	940.0	937.0	937.4	936.0	931.8	933.0	931.9	932.5
99.0	935.8	933.3	931.5	927.5	927.2	926.4	922.2	922.5	921.4	922.1
102.0	922.7	921.2	918.4	914.8	914.6	912.5	909.0	908.1	907.3	907.1
105.0	907.4	905.4	903.1	899.2	898.8	896.2	892.6	891.5	890.0	889.2
108.0	887.9	886.5	884.0	881.1	880.1	877.2	872.9	872.5	869.9	868.9
111.0	867.4	865.5	862.4	859.2	857.8	855.5	850.8	848.6	847.5	845.7
114.0	842.4	841.0	838.5	834.7	833.2	830.6	826.4	824.0	820.7	819.4
117.0	815.3	813.9	811.7	808.1	806.3	803.1	799.3	795.8	793.8	792.1
120.0	786.3	784.0	782.4	779.0	775.8	773.5	769.0	765.2	762.8	760.4
123.0	753.7	752.9	750.7	745.9	744.5	741.3	735.9	732.8	729.6	727.2
126.0	720.0	719.0	716.9	712.3	710.9	706.7	701.6	697.8	694.6	691.7
129.0	683.9	682.9	680.6	676.2	674.3	670.3	665.3	661.4	658.2	654.8
132.0	645.3	644.8	642.9	639.2	636.5	632.1	627.0	623.0	619.9	615.8
135.0	606.3	605.6	602.9	599.7	597.3	592.5	587.4	582.7	579.5	575.9
138.0	564.9	564.7	562.0	558.2	556.2	551.5	546.7	541.5	538.0	533.9
141.0	522.2	521.8	520.1	515.5	513.2	508.6	503.9	498.8	495.1	491.0
144.0	478.1	479.3	476.0	472.5	470.0	464.9	460.2	455.0	451.4	446.9
147.0	433.7	433.9	431.9	427.5	425.1	420.1	415.6	409.8	406.5	401.4
150.0	387.6	388.5	386.2	381.9	379.9	374.8	370.0	365.1	360.4	355.5
153.0	341.3	342.1	340.0	336.1	333.5	328.4	324.0	318.3	314.6	309.4
156.0	294.6	295.7	293.8	290.0	287.9	281.8	278.3	271.9	268.6	263.1
159.0	248.1	249.7	247.7	243.4	241.7	235.9	232.6	225.9	222.8	217.1
162.0	202.1	203.6	201.7	197.7	196.2	190.3	187.1	180.7	177.6	172.0
165.0	157.1	158.8	157.3	153.2	151.7	146.3	143.3	137.8	134.5	128.9
168.0	115.4	116.3	114.9	112.0	109.9	105.5	102.5	97.49	94.06	87.51
171.0	76.74	77.56	76.53	73.91	70.58	67.99	65.94	61.52	56.24	51.60
174.0	43.59	43.89	43.12	41.26	38.30	32.78	30.54	26.96	25.57	25.44
177.0	13.22	13.18	13.30	13.32	13.34	13.35	13.36	13.37	13.37	13.35
180.0	13.28	13.26	13.31	13.32	13.34	13.35	13.36	13.37	13.36	13.35
G/C	300.0	315.0	330.0	345.0						
0.0	80.61	80.97	80.87	81.27						
3.0	97.84	99.66	100.1	100.7						
6.0	126.7	129.4	129.9	130.9						
9.0	162.1	165.9	165.9	167.6						
12.0	202.5	206.6	206.9	208.6						
15.0	245.6	250.0	250.2	251.8						
18.0	289.9	294.5	294.9	296.0						
21.0	335.2	339.3	340.3	340.7						
24.0	380.1	384.7	385.6	385.8						
27.0	424.8	429.3	430.3	431.0						
30.0	469.0	473.2	474.0	474.7						
33.0	512.0	515.8	517.4	517.7						
36.0	554.1	558.2	559.6	558.9						
39.0	594.2	598.3	600.1	598.9						
42.0	633.0	637.7	639.2	638.4						
45.0	670.8	674.8	676.9	675.7						
48.0	706.8	710.0	713.0	711.3						
51.0	741.2	744.4	747.0	745.0						
54.0	772.2	775.4	778.0	776.8						
57.0	802.0	805.7	808.0	805.8						
60.0	830.1	833.3	835.0	833.6						
63.0	855.2	858.4	859.9	857.5						
66.0	877.4	880.3	882.4	880.0						

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

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: OB200-60W-57K

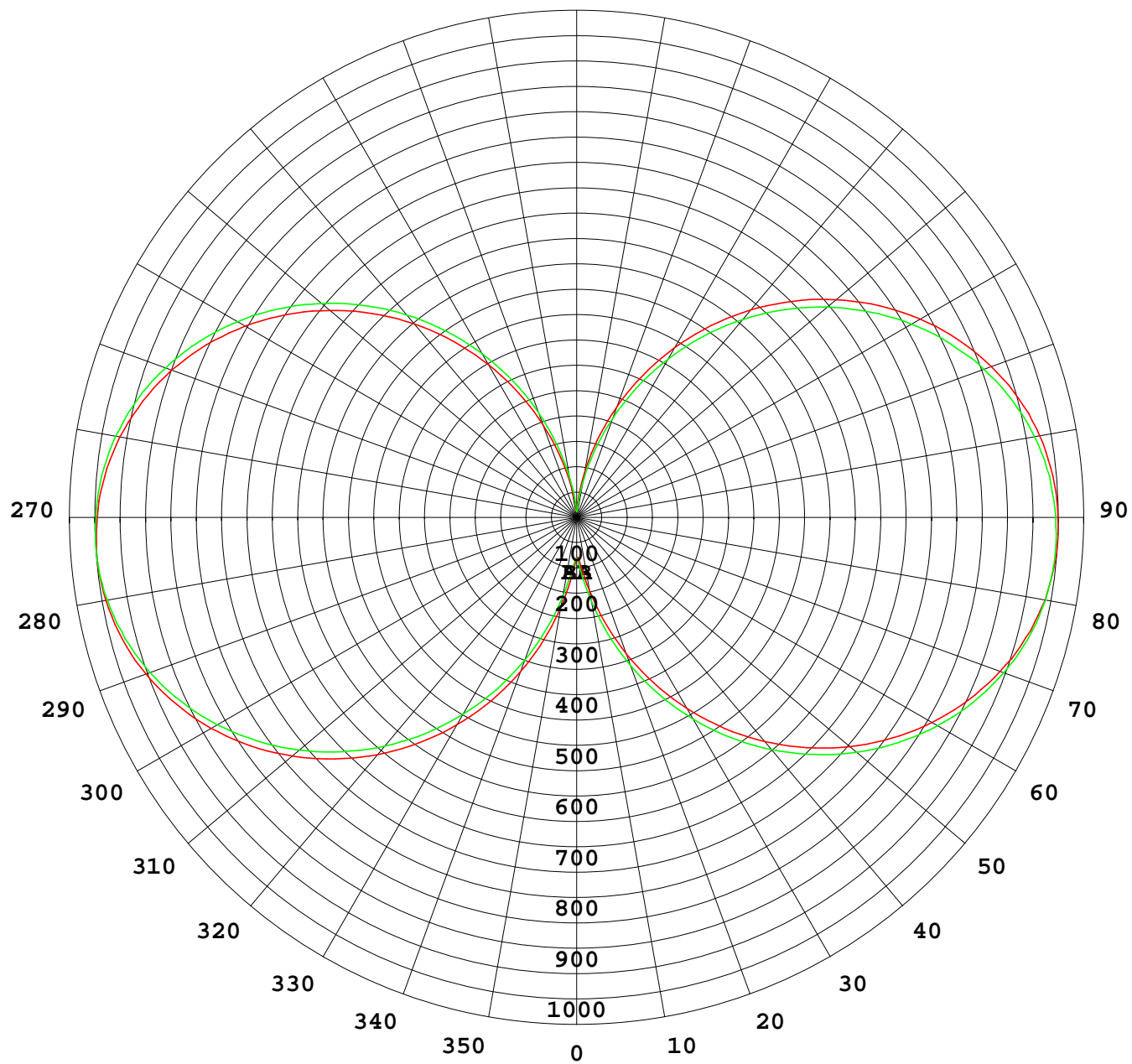
Photometric Data Table [cd]

69.0	896.6	897.7	901.1	899.1
72.0	913.2	915.1	917.4	915.1
75.0	927.1	928.3	931.7	928.9
78.0	937.5	939.5	940.8	938.9
81.0	945.4	946.1	948.4	945.7
84.0	949.1	949.6	951.8	949.1
87.0	949.5	949.6	952.1	949.3
90.0	946.8	947.3	950.0	946.4
93.0	941.6	942.5	944.3	941.5
96.0	933.5	933.6	935.4	932.2
99.0	922.2	921.7	923.7	920.8
102.0	907.5	906.0	907.6	905.2
105.0	889.6	887.7	890.6	886.7
108.0	868.6	866.8	869.3	866.0
111.0	844.4	844.6	845.4	841.7
114.0	819.8	817.6	818.9	815.9
117.0	791.1	788.8	790.6	787.1
120.0	760.0	757.9	758.8	755.9
123.0	726.1	724.2	725.1	721.8
126.0	691.6	688.1	689.2	686.6
129.0	653.6	650.8	652.1	648.6
132.0	615.0	612.0	612.3	609.9
135.0	574.6	571.1	571.8	568.9
138.0	532.2	529.3	529.5	526.4
141.0	489.1	485.7	485.8	483.6
144.0	444.9	441.3	441.1	439.4
147.0	399.5	396.3	395.3	393.3
150.0	353.6	349.9	349.4	347.6
153.0	307.4	303.4	302.9	300.7
156.0	261.1	257.1	256.7	254.2
159.0	215.1	210.6	210.4	207.9
162.0	170.1	165.8	165.5	163.1
165.0	127.1	123.5	122.4	121.0
168.0	87.12	84.05	83.01	81.82
171.0	52.83	50.08	49.08	48.26
174.0	25.59	23.47	22.75	21.75
177.0	13.30	13.28	13.26	13.25
180.0	13.31	13.29	13.28	13.26

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HSO
Test Date: 23 May 2023

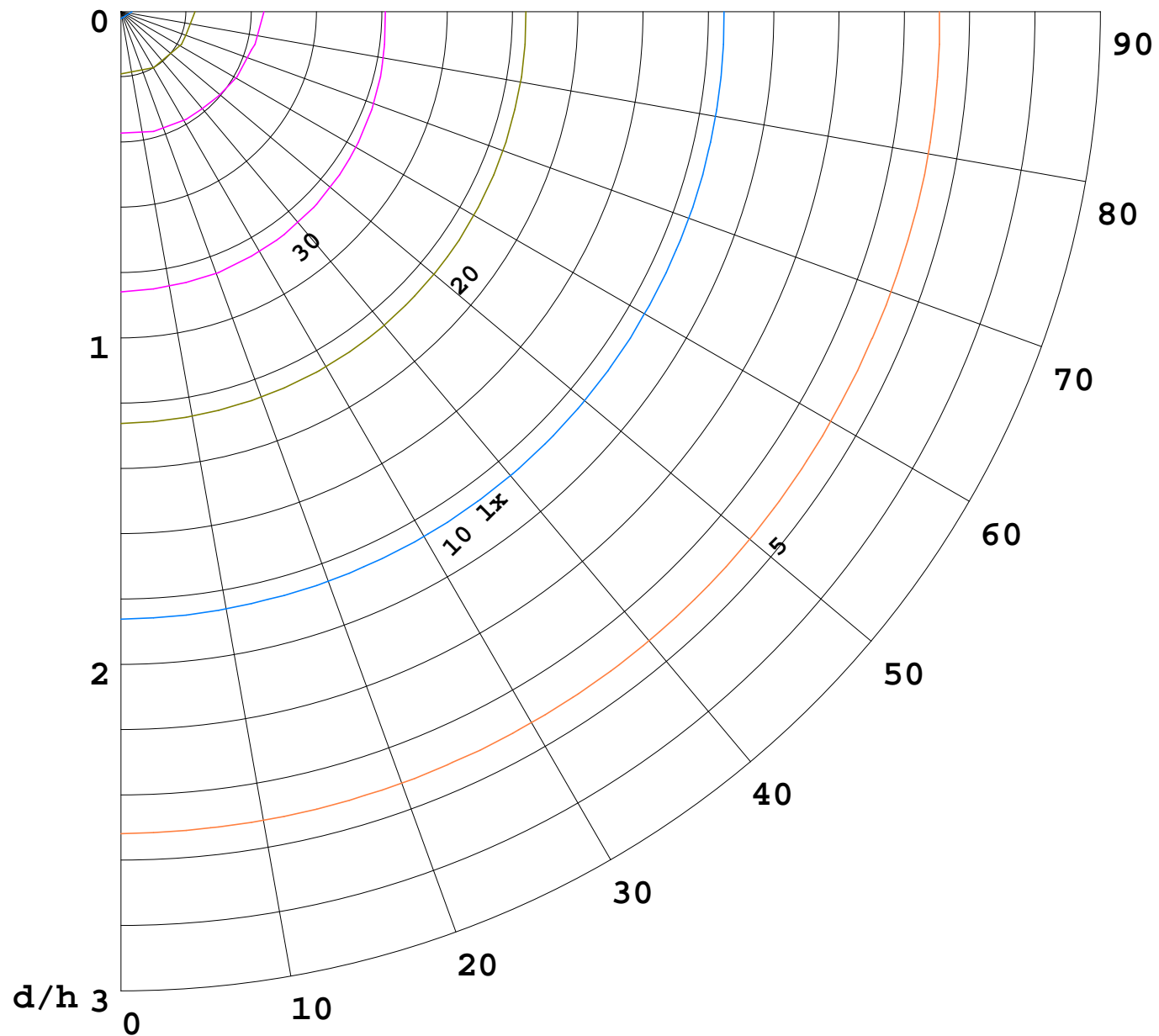
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: OB200-60W-57K

I(cd)



1000 lm

$\kappa = 1$



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

	Pcc	Pw	Pfc
————	70	50	30
————	50	30	20

