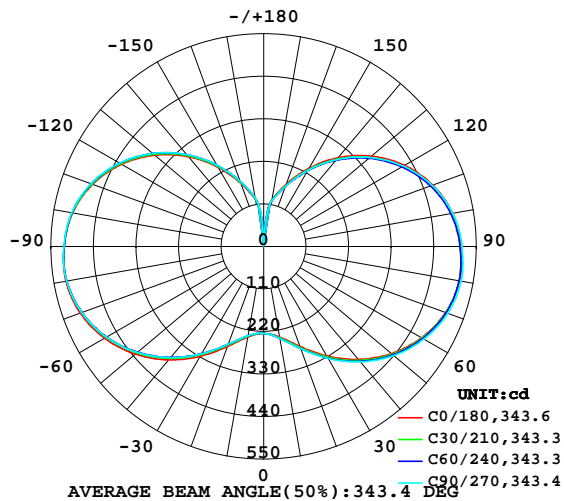


LUMINAIRE PHOTOMETRIC TEST REPORT

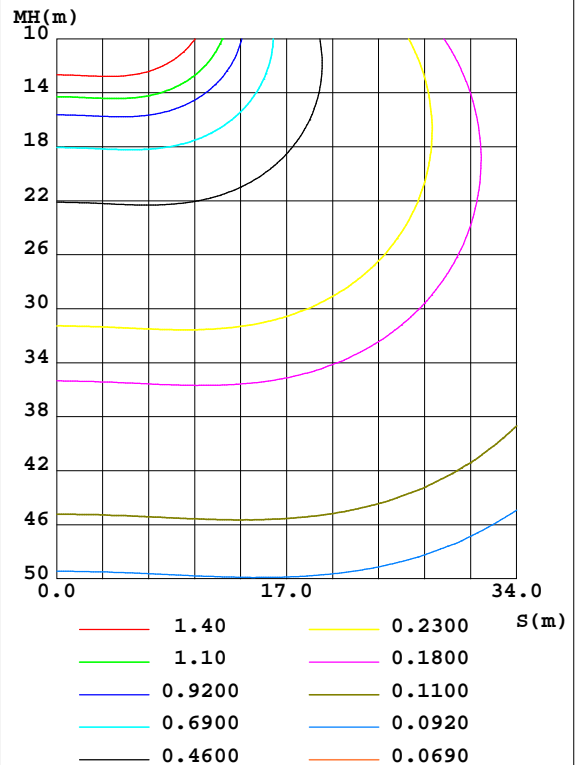
Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 146.08 lm/W			
MODEL	OBB-36W L+ -5700K	Imax(cd)	524.4	S/MH(C0/180)	2.43
NOMINAL POWER(W)	36	LOR(%)	100.0	S/MH(C90/270)	2.40
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	5217.8	η UP,DN(C0-180)	23.2,26.7
NOMINAL FLUX(lm)	5217.8	CIE CLASS	DIFFUSE	η UP,DN(C180-360)	23.6,26.4
LAMPS INSIDE	1	η up(%)	46.8	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	220	η down(%)	53.2	CIBSE SHR MAX	0.00

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:LUC
 Test Date:16 October 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks: OBB-36W L+ -5700K

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	238.1	240.6	241.6	239.7	237.8	235.6	234.6	236.2	0- 10	22.10	22.10	0.42,0.42
20	275.2	279.6	281.5	279.1	275.2	270.6	269.1	272.1	10- 20	72.83	94.93	1.82,1.82
30	326.9	331.6	334.9	332.4	327.7	321.4	320.2	323.5	20- 30	139.9	234.8	4.5,4.5
40	381.3	385.8	389.5	388.2	382.5	376.5	375.4	378.7	30- 40	223.7	458.5	8.79,8.79
50	431.4	434.5	439.0	439.5	433.1	427.0	426.4	429.1	40- 50	316.5	775.0	14.9,14.9
60	471.8	473.9	478.9	481.1	475.4	469.9	469.2	470.8	50- 60	407.8	1183	22.7,22.7
70	500.5	501.0	506.5	510.4	504.5	500.6	500.6	501.6	60- 70	486.3	1669	32,32
80	513.9	512.8	518.4	524.0	519.2	516.8	517.6	517.0	70- 80	541.4	2210	42.4,42.4
90	510.2	507.5	512.8	519.2	516.1	515.6	516.7	515.0	80- 90	564.3	2775	53.2,53.2
100	496.0	491.6	496.3	503.7	501.9	502.7	504.1	502.0	90-100	554.6	3329	63.8,63.8
110	465.2	459.6	463.4	471.4	471.1	473.3	475.1	472.1	100-110	513.9	3843	73.7,73.7
120	420.2	413.5	416.4	423.7	425.1	428.4	430.9	427.3	110-120	444.2	4288	82.2,82.2
130	363.7	356.9	358.1	365.3	367.7	372.3	374.6	370.6	120-130	355.4	4643	89,89
140	299.9	293.3	293.3	299.7	303.1	308.1	310.3	306.6	130-140	259.7	4903	94,94
150	233.5	227.8	226.9	232.8	236.6	240.9	243.3	239.0	140-150	169.5	5072	97.2,97.2
160	171.3	166.9	165.6	170.4	173.8	177.5	179.6	175.7	150-160	94.89	5167	99,99
170	121.8	120.5	119.7	122.4	123.9	125.5	127.0	122.6	160-170	42.31	5209	99.8,99.8
180	8.555	8.560	8.582	8.632	8.560	8.578	8.591	8.632	170-180	8.506	5218	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 605 lm

%lum = 11.6%

%lamp = 11.6%

Conical surface Flux(120deg): 1182.8 lm

%lum = 22.7%

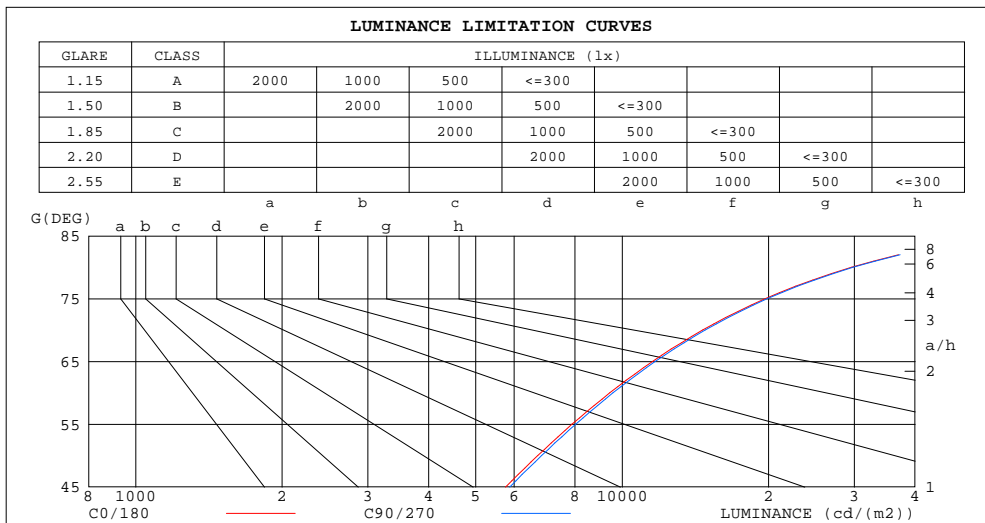
%lamp = 22.7%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

LUMINANCE LIMITATION CURVES

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	58998	59380
80	29597	29854
75	19688	19886
70	14633	14808
65	11548	11700
60	9437	9579
55	7894	8029
50	6712	6829
45	5756	5874

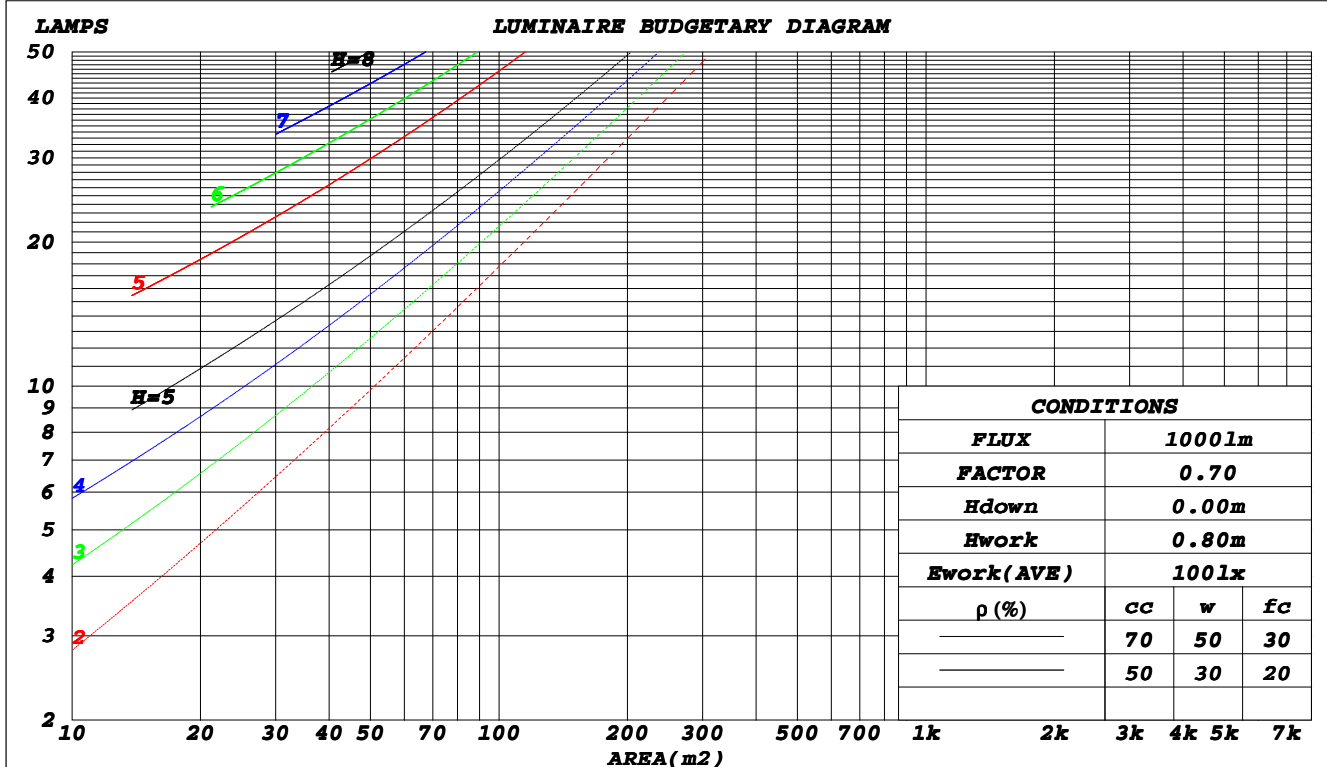
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	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	.00	.00	.00	.85	.85	.85	.72	.72	.72	.59	.59	.59	.53
1.0	.86	.80	.75	.79	.74	.69	.66	.62	.59	.55	.51	.48	.44	.41	.39	.33
2.0	.72	.64	.57	.66	.59	.53	.55	.49	.44	.45	.40	.36	.35	.32	.29	.24
3.0	.62	.52	.45	.57	.48	.42	.47	.40	.35	.38	.33	.28	.30	.26	.22	.18
4.0	.54	.44	.37	.49	.41	.34	.41	.34	.28	.33	.27	.23	.25	.21	.18	.14
5.0	.47	.37	.30	.43	.35	.28	.36	.29	.23	.29	.23	.19	.22	.18	.15	.11
6.0	.42	.32	.26	.38	.30	.24	.32	.25	.20	.26	.20	.16	.20	.16	.12	.09
7.0	.37	.28	.22	.34	.26	.20	.29	.22	.17	.23	.18	.14	.18	.14	.10	.08
8.0	.34	.25	.19	.31	.23	.18	.26	.19	.15	.21	.16	.12	.16	.12	.09	.06
9.0	.31	.22	.17	.28	.21	.15	.23	.17	.13	.19	.14	.10	.15	.11	.08	.06
10.0	.28	.20	.15	.26	.18	.13	.21	.15	.11	.18	.13	.09	.14	.10	.07	.05



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

WEC AND CCEC

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	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	.431	.245	.078	.410	.234	.074	.369	.212	.068	.332	.192	.061	.298	.173	.056		
2.0	.356	.195	.060	.337	.186	.057	.300	.167	.052	.266	.149	.047	.234	.133	.042		
3.0	.309	.164	.049	.291	.156	.047	.257	.139	.042	.226	.124	.038	.197	.109	.034		
4.0	.274	.142	.042	.257	.135	.040	.227	.120	.036	.198	.106	.032	.171	.093	.028		
5.0	.246	.125	.036	.231	.119	.035	.203	.106	.031	.176	.093	.028	.152	.081	.024		
6.0	.224	.112	.032	.210	.106	.031	.184	.094	.027	.159	.083	.024	.136	.072	.021		
7.0	.205	.101	.029	.192	.096	.027	.168	.085	.024	.145	.075	.022	.124	.064	.019		
8.0	.189	.092	.026	.177	.087	.025	.155	.077	.022	.134	.068	.020	.114	.059	.017		
9.0	.176	.085	.024	.165	.080	.023	.144	.071	.020	.124	.062	.018	.105	.054	.015		
10.0	.164	.079	.022	.154	.074	.021	.134	.066	.018	.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	.547	.547	.547	.468	.468	.468	.319	.319	.319	.183	.183	.183	.059	.059	.059	
1.0	.548	.515	.484	.469	.442	.417	.321	.304	.288	.185	.176	.168	.059	.057	.054	
2.0	.543	.494	.452	.465	.425	.391	.319	.294	.273	.184	.171	.160	.059	.055	.052	
3.0	.536	.479	.433	.460	.413	.375	.315	.287	.263	.182	.168	.155	.059	.054	.051	
4.0	.529	.467	.420	.454	.404	.365	.312	.281	.257	.180	.165	.152	.058	.054	.050	
5.0	.521	.458	.412	.447	.396	.358	.308	.277	.253	.179	.163	.150	.058	.053	.049	
6.0	.514	.451	.406	.442	.390	.353	.305	.273	.250	.177	.161	.149	.057	.053	.049	
7.0	.507	.445	.401	.436	.385	.350	.301	.270	.248	.175	.159	.147	.057	.052	.049	
8.0	.500	.440	.398	.430	.381	.347	.298	.268	.246	.173	.158	.147	.056	.052	.049	
9.0	.494	.435	.395	.425	.378	.345	.295	.265	.245	.172	.157	.146	.056	.051	.048	
10.0	.488	.431	.393	.421	.374	.343	.292	.263	.244	.170	.156	.145	.055	.051	.048	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

UGR(Unified Glare Rating) Table

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm										
NAME: OBB-36W L+ -5700K						TYPE:LED			WEIGHT:	
SPEC.:OBB-36W L+ -5700K						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	17.3	18.4	18.1	19.3	20.4	17.3	18.5	18.1	19.3	20.4
3H	20.7	21.8	21.6	22.7	23.8	20.8	21.8	21.7	22.7	23.9
4H	22.7	23.7	23.6	24.6	25.7	22.7	23.7	23.6	24.6	25.8
6H	24.8	25.7	25.7	26.7	27.8	24.9	25.8	25.8	26.7	27.9
8H	26.0	26.9	26.9	27.8	29.0	26.0	26.9	26.9	27.9	29.0
12H	27.3	28.2	28.2	29.1	30.3	27.4	28.2	28.3	29.2	30.4
4H 2H	18.3	19.3	19.2	20.2	21.4	18.4	19.4	19.3	20.3	21.4
3H	21.9	22.8	22.8	23.7	24.9	21.9	22.8	22.9	23.7	24.9
4H	24.0	24.7	24.9	25.7	26.9	24.0	24.8	24.9	25.7	27.0
6H	26.2	26.9	27.2	27.9	29.1	26.3	27.0	27.2	27.9	29.2
8H	27.5	28.1	28.4	29.1	30.4	27.5	28.2	28.5	29.2	30.4
12H	28.9	29.5	29.9	30.5	31.8	28.9	29.6	29.9	30.5	31.8
8H 4H	24.7	25.4	25.7	26.3	27.6	24.7	25.4	25.7	26.4	27.6
6H	27.2	27.8	28.2	28.8	30.1	27.3	27.8	28.2	28.8	30.1
8H	28.7	29.2	29.6	30.2	31.5	28.7	29.2	29.7	30.2	31.5
12H	30.3	30.7	31.3	31.8	33.1	30.3	30.8	31.3	31.8	33.1
12H 4H	24.9	25.5	25.9	26.5	27.8	24.9	25.6	25.9	26.5	27.8
6H	27.6	28.1	28.5	29.1	30.4	27.6	28.1	28.6	29.1	30.4
8H	29.1	29.5	30.1	30.6	31.9	29.1	29.6	30.1	30.6	31.9
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 5218 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.7)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

UTILIZATION FACTORS TABLE

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

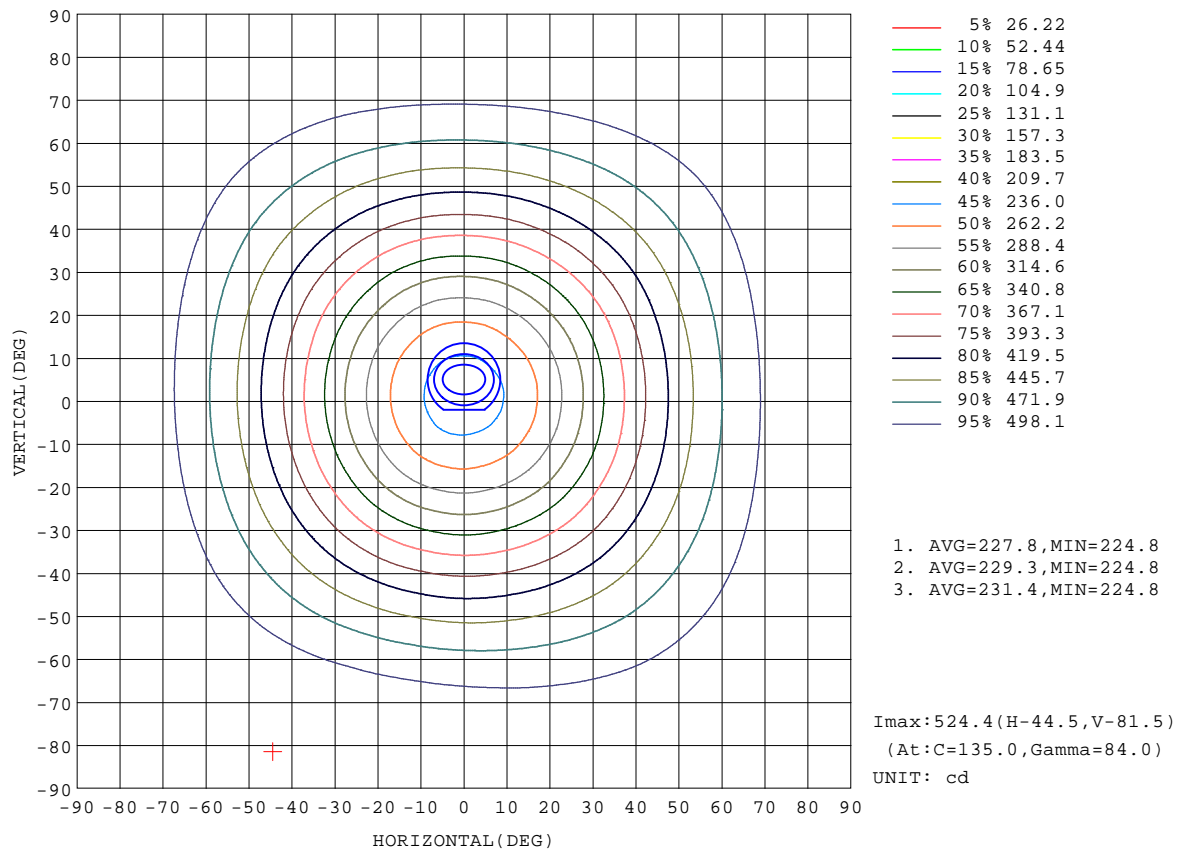
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	35	22	15	34	21	14	30	20	13	6
0.80	44	30	21	41	28	20	36	25	18	9
1.00	51	36	27	48	34	26	42	33	23	12
1.25	58	43	33	54	41	32	47	36	28	15
1.50	63	49	39	59	46	37	51	40	33	18
2.00	71	58	48	66	54	45	56	47	39	22
2.50	76	64	54	71	59	51	60	51	44	25
3.00	80	69	60	74	64	56	63	55	49	28
4.00	86	76	68	79	70	63	67	60	55	32
5.00	89	81	73	82	75	68	70	64	59	34
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

ISOCANDELA DIAGRAM

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



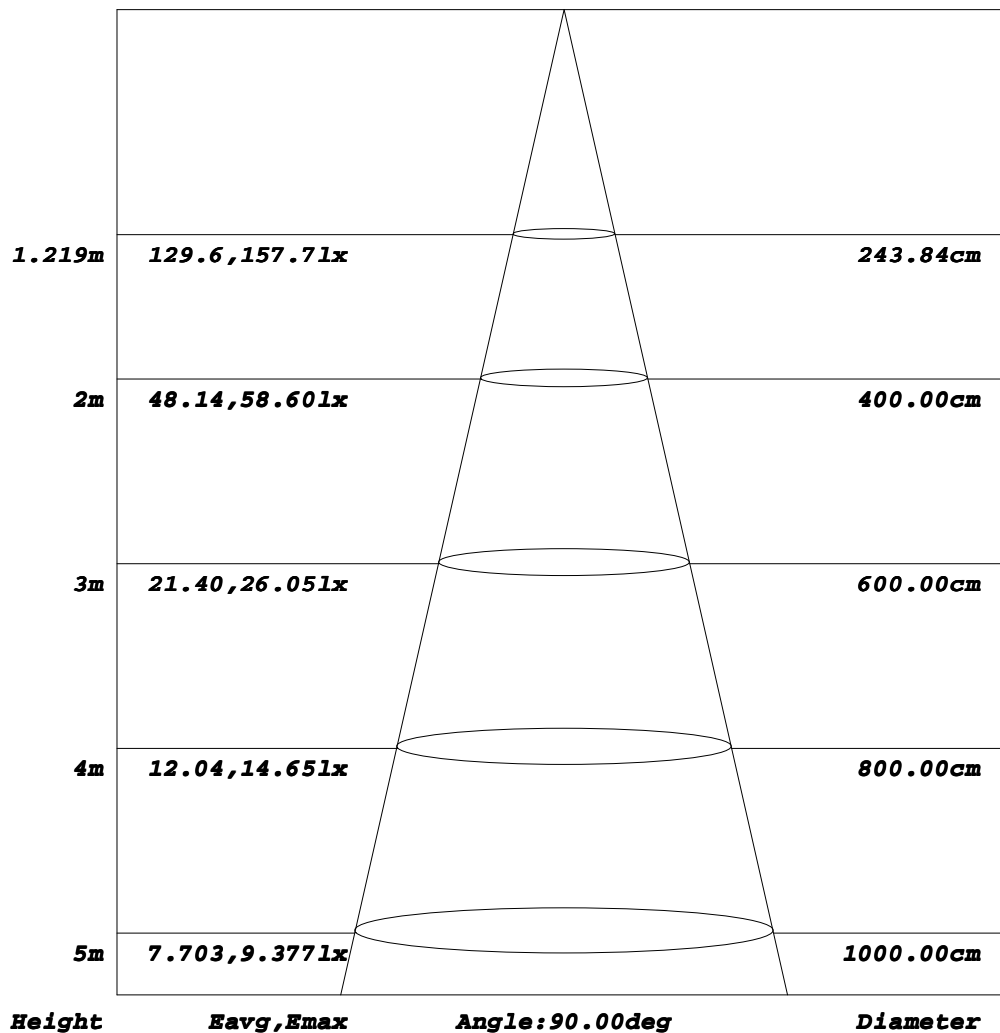
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

AAI Figure

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Flux out:605.0 lm



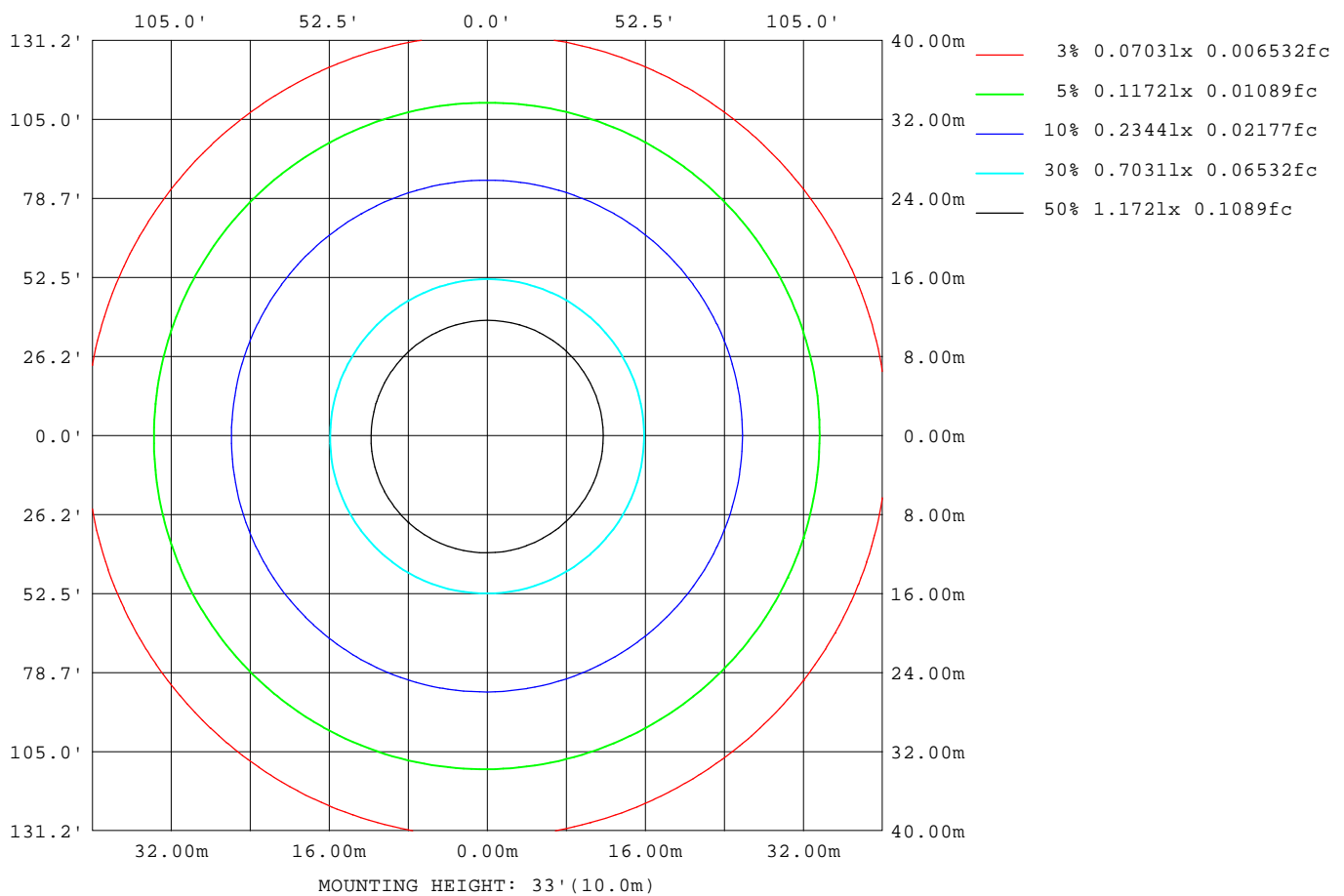
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

ISOLUX DIAGRAM

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

LED Avg.L Report

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

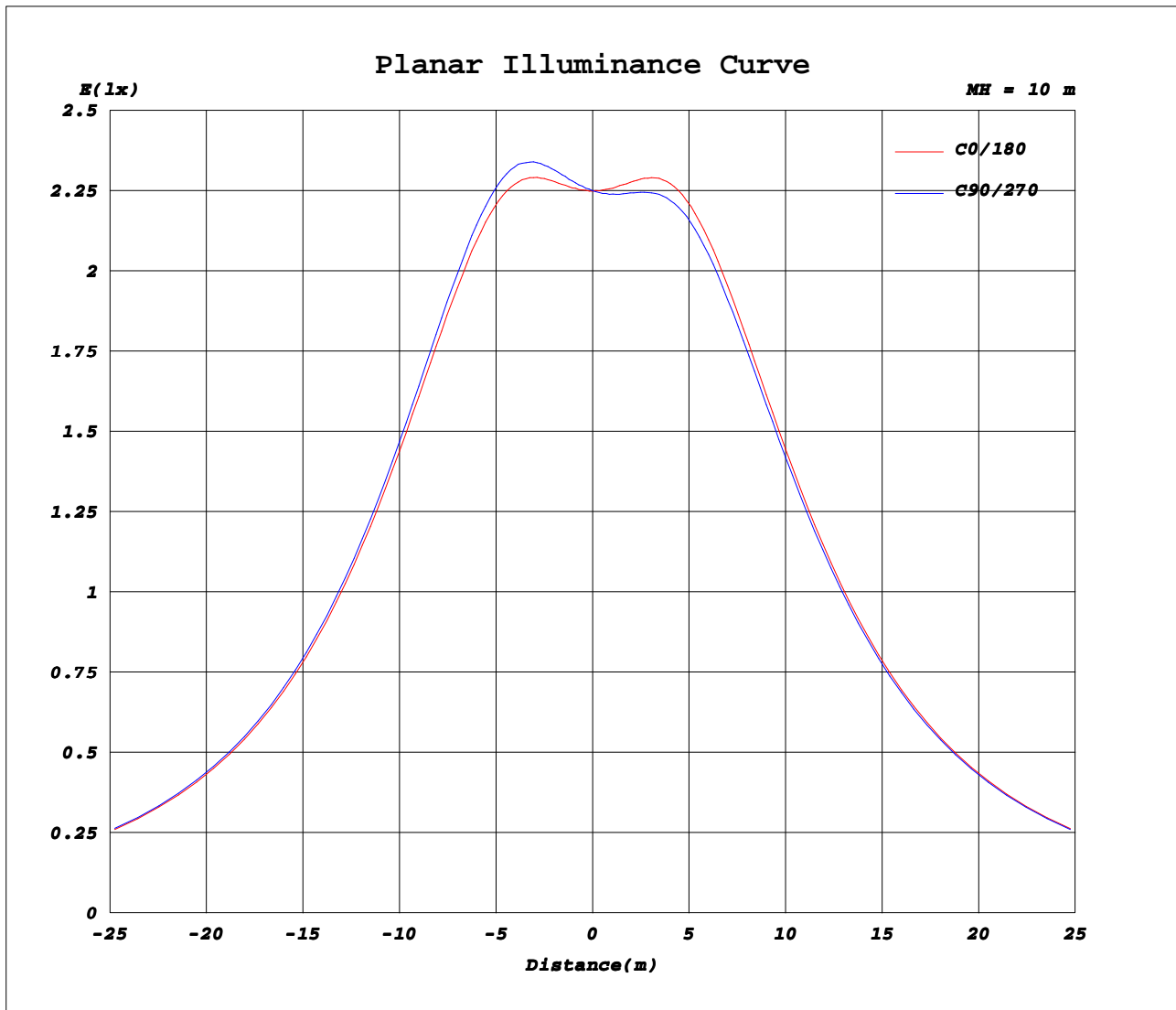
AvgL	cd/m2
L_0~180(65)av	11589
L_0~180(75)av	19774
L_0~180(85)av	59311
L_90~270(65)av	11609
L_90~270(75)av	19817
L_90~270(85)av	59494
L_45(65)av	11605
L_45(75)av	19801
L_45(85)av	59439

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 16 October 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
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	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225
5	228	229	229	230	230	230	230	230	230	229	229	228	228	228	227	227	227	227	226
10	238	239	240	241	242	242	242	241	241	240	239	239	238	237	236	236	235	234	235
15	254	255	257	258	259	259	259	259	257	257	256	255	254	253	251	250	249	248	249
20	275	276	278	280	281	282	282	282	280	279	278	277	275	274	272	271	269	268	269
25	300	302	304	305	306	308	307	307	306	305	304	302	300	299	296	295	293	293	293
30	327	329	330	332	334	335	335	335	334	332	332	330	328	326	323	321	320	319	320
35	354	356	358	359	361	362	362	363	362	361	360	358	356	353	351	349	347	347	348
40	381	383	385	386	388	389	389	390	390	388	388	386	383	381	378	376	375	374	375
45	407	408	410	411	413	415	415	416	416	415	414	412	409	407	404	403	401	401	402
50	431	432	434	434	436	438	439	441	441	440	438	436	433	431	429	427	426	425	426
55	453	454	455	456	457	459	461	462	462	462	461	458	455	453	451	450	449	448	449
60	472	472	473	474	476	477	479	481	482	481	480	478	475	473	471	470	469	469	469
65	488	488	489	489	491	492	494	497	498	498	497	495	491	490	488	487	486	486	487
70	500	501	501	501	502	504	506	509	511	510	509	507	504	503	501	501	500	500	501
75	510	509	509	509	510	511	515	517	519	519	518	516	514	512	511	511	510	510	511
80	514	513	513	513	513	515	518	522	524	524	523	521	519	518	517	517	517	517	518
85	514	514	512	512	512	514	518	520	523	524	523	521	520	519	519	519	519	519	520
90	510	509	508	508	508	510	513	516	519	519	519	517	516	515	515	516	516	516	517
95	505	504	503	502	501	503	507	510	513	513	513	512	511	511	510	511	511	512	512
100	496	494	493	492	491	493	496	500	503	504	503	503	502	502	502	503	503	504	504
105	483	481	479	478	477	478	482	485	488	490	489	488	488	488	489	490	491	492	491
110	465	463	461	460	459	460	463	467	470	471	471	471	471	471	472	473	475	475	475
115	444	442	440	438	437	438	442	445	448	449	449	449	450	450	452	453	454	455	455
120	420	418	415	414	412	413	416	419	422	424	424	424	425	426	427	428	431	431	431
125	393	391	388	386	385	386	388	391	394	396	396	396	397	399	400	402	404	404	404
130	364	361	358	357	355	356	358	360	363	365	366	366	368	369	371	372	374	375	375
135	332	330	327	325	324	324	326	328	331	333	334	335	336	337	339	341	343	344	343
140	300	298	295	293	291	291	293	295	298	300	300	301	303	304	307	308	311	311	310
145	267	265	262	261	258	259	260	262	264	267	267	268	270	271	273	275	277	277	277
150	233	232	229	228	225	226	227	228	231	233	233	235	237	237	240	241	243	244	243
155	201	200	197	196	194	194	195	196	198	201	201	202	204	205	207	208	211	211	211
160	171	170	168	167	165	165	166	167	168	170	170	172	174	174	177	177	180	180	180
165	145	144	142	141	140	140	141	141	143	144	144	146	147	148	150	150	152	152	152
170	122	122	121	120	119	119	120	120	121	122	123	124	124	124	124	125	127	128	127
175	76.0	73.7	70.7	68.8	66.1	65.8	67.8	69.0	72.2	74.0	74.7	76.8	74.7	76.8	80.1	82.0	84.2	85.5	84.5
180	8.56	8.56	8.56	8.56	8.56	8.56	8.58	8.58	8.60	8.63	8.63	8.64	8.56	8.56	8.56	8.58	8.57	8.60	8.59

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.0V I:0.1709A P:35.72W PF:0.9502 Lamp Flux:5217.8x1 lm		
NAME: OBB-36W L+ -5700K	TYPE:LED	WEIGHT:
SPEC.:OBB-36W L+ -5700K	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEG) γ (DEG)	285	300	315	330	345														
0	225	225	225	225	225														
5	227	227	227	228	228														
10	235	235	236	237	237														
15	250	251	251	252	253														
20	270	271	272	273	274														
25	294	296	297	297	299														
30	321	323	323	324	325														
35	348	350	351	351	353														
40	376	377	379	379	380														
45	402	404	405	405	406														
50	427	428	429	429	430														
55	450	451	452	451	452														
60	470	471	471	471	472														
65	487	488	488	488	488														
70	501	501	502	501	501														
75	511	511	511	510	510														
80	518	517	517	516	515														
85	520	519	518	517	516														
90	517	516	515	514	513														
95	512	512	510	509	508														
100	504	503	502	500	499														
105	492	491	489	487	486														
110	475	474	472	471	469														
115	455	453	452	450	448														
120	431	429	427	426	424														
125	404	402	400	399	397														
130	375	373	371	369	367														
135	343	341	339	338	335														
140	310	308	307	305	303														
145	276	274	273	272	269														
150	243	241	239	239	236														
155	209	208	206	206	204														
160	179	177	176	176	173														
165	151	150	148	146	144														
170	126	124	123	121	117														
175	83.0	78.5	75.7	74.7	72.2														
180	8.61	8.61	8.63	8.64	8.65														

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LUC
Test Date:16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

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	224.9	225.0	225.0	225.1	225.2	225.1	225.0	225.0	224.8	225.0
3.0	226.2	226.4	227.0	227.1	227.4	227.5	227.4	227.1	226.8	226.6
6.0	229.6	230.3	230.9	231.3	231.9	232.1	231.9	231.7	231.0	230.6
9.0	235.6	236.3	237.3	237.9	238.9	239.2	238.7	238.5	237.5	237.0
12.0	243.8	244.5	245.8	246.7	247.8	248.1	247.8	247.5	246.3	245.9
15.0	254.0	254.9	256.6	257.5	258.9	259.4	259.0	258.7	257.5	256.7
18.0	266.3	267.3	269.3	270.2	271.8	272.5	271.9	271.9	270.4	269.4
21.0	279.9	281.3	283.2	284.3	285.9	286.8	286.6	286.3	284.9	283.8
24.0	294.9	296.3	298.2	299.5	301.5	302.4	302.0	302.0	300.5	299.3
27.0	310.6	312.2	314.1	315.1	317.3	318.2	318.1	318.2	316.7	315.6
30.0	326.9	328.5	330.4	331.6	333.7	334.8	334.9	335.1	333.6	332.4
33.0	343.3	345.0	346.9	348.0	350.2	351.3	351.3	351.7	350.5	349.4
36.0	359.7	361.2	363.2	364.6	366.5	367.8	367.9	368.6	367.2	366.3
39.0	376.1	377.5	379.3	380.6	382.4	383.8	384.0	384.9	383.8	383.1
42.0	391.8	393.1	394.7	396.0	398.1	399.5	399.8	401.0	400.2	399.3
45.0	407.0	408.1	409.8	410.8	413.0	414.6	415.4	416.2	416.1	414.9
48.0	421.7	422.5	424.4	425.3	427.4	428.8	429.8	431.3	431.0	429.8
51.0	435.5	436.4	438.0	439.0	440.7	442.2	443.5	444.9	445.0	444.1
54.0	448.4	449.4	450.8	451.5	453.5	455.0	456.2	458.1	458.4	457.5
57.0	460.8	461.3	462.6	462.9	465.1	466.4	468.1	470.1	470.7	469.6
60.0	471.8	472.3	473.3	473.9	475.6	477.1	478.9	481.0	482.2	481.1
63.0	481.9	482.1	482.8	483.6	484.5	486.7	488.8	491.5	492.1	491.3
66.0	490.7	490.8	491.4	491.8	493.1	495.1	497.4	499.9	500.9	500.5
69.0	498.3	498.3	499.0	499.9	502.0	504.4	507.4	509.5	508.5	508.2
72.0	504.4	504.4	504.6	504.4	505.7	507.4	510.3	513.3	514.6	514.4
75.0	509.6	509.0	508.7	508.7	509.7	511.3	514.7	517.3	519.2	519.1
78.0	512.7	512.4	511.9	511.7	512.2	514.0	517.4	520.3	522.6	522.7
81.0	514.4	514.1	513.6	512.7	513.4	515.3	518.4	521.7	523.9	524.2
84.0	514.6	513.9	512.8	512.1	512.9	514.3	517.8	521.3	523.7	524.4
87.0	513.1	511.9	510.7	510.3	510.3	511.7	515.4	518.8	521.9	522.0
90.0	510.2	509.3	508.2	507.5	507.6	509.6	512.8	516.0	519.0	519.2
93.0	507.8	506.5	505.5	504.5	504.5	506.3	509.5	512.9	516.0	516.5
96.0	503.8	502.2	500.9	500.0	499.9	501.2	505.1	508.4	511.3	511.9
99.0	498.3	496.8	495.3	493.9	493.6	495.4	498.7	502.3	505.2	506.3
102.0	491.2	489.5	487.8	486.4	485.9	487.5	491.2	494.3	497.5	498.7
105.0	482.7	481.0	479.0	477.8	477.0	478.2	481.8	485.2	488.4	489.6
108.0	472.6	470.5	468.6	467.3	466.3	467.8	471.3	474.6	477.8	478.8
111.0	461.5	459.5	457.1	455.6	454.6	455.8	459.4	462.4	465.7	467.0
114.0	448.9	446.6	444.3	443.1	441.8	442.5	446.0	449.3	452.5	453.7
117.0	435.2	432.9	430.5	428.9	427.7	428.4	431.6	434.6	437.9	439.3
120.0	420.2	418.0	415.1	413.5	412.1	413.1	416.4	418.8	422.1	423.7
123.0	404.4	402.0	399.3	397.5	396.0	396.8	399.8	402.6	405.8	407.3
126.0	387.3	385.0	382.2	380.6	379.6	379.6	382.6	385.0	388.0	389.8
129.0	369.8	367.5	364.8	362.9	361.5	361.6	364.4	366.6	369.9	371.5
132.0	351.4	349.1	346.3	344.4	342.9	343.1	345.8	347.7	350.9	352.7
135.0	332.5	330.0	327.4	325.4	323.9	324.0	326.4	328.2	331.3	333.2
138.0	313.0	310.8	307.8	306.0	304.4	304.5	306.9	308.4	311.5	313.3
141.0	293.3	290.9	288.3	286.5	284.6	284.7	286.8	288.3	291.4	293.1
144.0	273.3	271.4	268.3	267.2	264.8	265.5	266.6	268.5	270.9	273.1
147.0	253.3	251.6	248.6	247.4	245.0	245.6	246.6	248.5	250.6	253.0
150.0	233.5	231.9	228.9	227.8	225.4	225.8	226.9	228.5	230.6	232.8
153.0	213.9	212.5	209.5	208.7	206.1	206.5	207.2	209.1	211.0	213.2
156.0	195.0	193.8	190.7	190.0	187.8	187.9	188.8	190.3	191.9	194.1
159.0	177.2	175.9	173.3	172.6	170.3	170.6	171.1	172.6	174.0	176.2
162.0	160.3	159.4	157.0	156.3	154.1	154.5	154.8	156.2	157.4	159.4
165.0	145.5	144.4	142.4	141.5	140.3	139.9	140.8	141.3	142.8	144.1
168.0	131.4	131.1	129.6	128.6	127.6	127.3	127.9	128.4	129.6	130.8
171.0	116.2	117.3	115.7	114.7	113.3	113.1	114.0	114.5	116.2	117.4
174.0	90.17	88.05	85.40	83.86	81.49	81.35	83.02	84.12	86.85	88.47
177.0	27.81	24.03	19.24	16.56	13.22	12.61	14.32	15.70	19.99	23.04
180.0	8.555	8.560	8.560	8.560	8.564	8.564	8.582	8.582	8.601	8.632
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	224.9	224.9	224.9	225.0	225.0	225.1	225.2	225.1	225.0	225.0
3.0	226.5	226.2	226.1	226.0	225.7	225.6	225.1	225.1	225.0	225.2
6.0	230.5	230.2	229.6	229.1	228.7	228.3	227.7	227.4	227.6	227.6
9.0	236.7	236.3	235.5	234.8	233.8	233.5	232.5	232.2	232.6	232.9
12.0	245.5	244.6	243.6	242.7	241.4	240.6	239.6	239.3	239.7	240.0
15.0	256.3	255.2	254.0	252.7	251.3	250.1	248.9	248.5	249.2	249.6
18.0	269.0	267.6	266.2	264.7	262.9	261.7	260.3	259.9	260.6	260.9
21.0	283.4	281.8	280.0	278.3	276.4	275.0	273.5	272.9	273.7	274.1
24.0	298.7	297.0	295.2	293.4	291.2	289.8	287.9	287.4	288.3	288.9
27.0	315.0	313.3	311.2	309.2	306.8	305.2	303.5	302.9	303.8	304.5
30.0	331.7	329.9	327.7	325.5	322.9	321.4	319.5	319.3	320.2	320.6

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

Photometric Data Table [cd]

33.0	348.6	346.7	344.2	342.1	339.8	338.1	336.3	335.9	336.9	337.2
36.0	365.4	363.4	360.9	358.8	356.2	354.5	352.9	352.2	353.5	353.9
39.0	381.9	380.0	377.6	375.1	372.5	370.9	369.1	368.7	369.7	370.4
42.0	398.0	396.0	393.5	391.0	388.4	387.2	385.2	385.1	385.8	386.6
45.0	413.6	411.6	408.8	406.8	404.2	402.8	401.1	400.5	401.7	402.3
48.0	428.7	426.7	423.7	421.6	419.2	417.8	416.0	415.8	416.6	417.1
51.0	443.1	440.8	438.2	435.5	433.3	432.0	430.4	430.3	431.1	431.9
54.0	456.3	454.1	451.4	449.1	446.7	445.7	444.1	443.9	444.8	445.3
57.0	468.7	466.6	463.9	461.5	459.3	458.1	456.7	456.7	457.2	458.0
60.0	479.8	478.0	475.4	473.1	471.0	469.9	468.6	468.6	469.2	469.9
63.0	490.5	488.0	485.3	483.2	481.6	480.5	479.3	479.1	480.0	480.5
66.0	499.1	497.4	494.5	492.7	490.9	489.9	489.0	489.1	489.4	489.9
69.0	507.0	505.1	501.8	500.5	499.1	498.1	497.1	497.6	498.1	498.6
72.0	513.4	511.2	508.8	507.0	505.8	505.2	504.7	504.7	505.3	505.7
75.0	518.2	516.4	514.0	512.4	511.4	510.8	510.2	510.2	511.1	511.3
78.0	521.4	519.8	517.6	516.3	515.4	515.2	514.7	515.0	515.1	515.8
81.0	523.1	521.9	519.5	518.7	518.0	517.7	517.6	518.0	518.1	518.7
84.0	523.3	522.1	520.0	519.6	519.2	518.9	518.9	519.4	519.5	519.6
87.0	521.2	520.0	518.9	518.1	518.0	517.8	518.3	518.9	519.0	519.3
90.0	518.9	517.4	516.1	515.4	515.3	515.6	515.7	516.4	516.7	517.0
93.0	516.0	514.9	513.4	513.1	513.1	513.0	513.6	513.9	513.9	514.5
96.0	511.2	510.7	509.5	509.3	509.4	509.3	509.8	510.7	510.9	511.2
99.0	505.5	504.8	504.0	503.6	504.2	504.4	505.4	506.0	505.9	506.4
102.0	498.0	497.7	496.8	496.7	497.3	498.0	499.0	499.5	499.6	499.8
105.0	489.2	488.3	488.2	488.3	489.0	489.8	490.9	491.8	491.4	491.6
108.0	478.7	478.3	478.1	478.6	479.6	480.7	481.8	482.3	482.1	482.3
111.0	466.6	466.9	466.6	467.3	468.3	469.6	470.8	471.7	471.4	471.5
114.0	453.8	453.7	454.1	454.6	456.2	457.1	458.6	459.5	459.2	459.2
117.0	439.6	439.7	440.1	440.7	442.3	443.5	445.4	446.0	446.0	446.0
120.0	423.8	424.1	425.1	425.7	427.2	428.4	430.6	431.5	430.9	430.9
123.0	407.5	408.0	408.7	409.6	411.3	412.9	414.6	415.6	415.2	414.9
126.0	390.0	390.7	391.8	392.7	394.4	396.1	398.1	398.9	398.4	398.3
129.0	371.8	372.6	373.6	374.7	376.8	378.1	380.2	381.2	380.7	380.7
132.0	353.0	354.2	355.2	356.4	358.3	359.6	362.0	362.9	362.4	362.3
135.0	333.5	334.6	336.0	337.3	339.5	340.8	343.0	343.8	343.1	342.9
138.0	314.0	314.7	316.2	317.6	319.8	321.3	323.4	324.2	323.8	323.5
141.0	293.5	294.7	296.4	297.7	300.0	301.3	303.5	304.4	303.7	303.1
144.0	273.2	274.6	276.5	277.3	279.8	281.1	283.4	284.2	283.6	283.2
147.0	253.0	254.8	256.8	257.3	260.1	260.8	263.8	264.0	263.5	262.7
150.0	233.0	234.8	236.6	237.2	240.0	240.9	243.5	243.6	243.3	242.6
153.0	213.0	215.1	216.9	217.4	220.3	221.1	223.7	223.6	223.5	222.5
156.0	194.2	196.1	197.8	198.4	201.1	201.8	204.3	204.3	204.0	203.1
159.0	176.2	178.0	179.6	180.3	182.7	183.5	185.7	185.7	185.5	184.5
162.0	159.1	161.2	162.7	163.2	165.6	166.2	168.2	168.1	168.1	167.0
165.0	144.3	145.5	147.1	147.6	149.8	149.9	152.2	152.0	151.9	150.8
168.0	131.1	132.1	133.4	134.0	134.0	135.7	137.4	138.1	137.4	136.4
171.0	117.8	118.9	118.4	117.8	118.5	120.1	121.8	122.4	121.7	121.0
174.0	89.15	90.87	89.62	91.49	93.25	93.80	95.89	97.25	97.02	94.54
177.0	24.07	27.31	21.61	25.02	30.18	33.10	37.99	38.81	36.34	34.51
180.0	8.632	8.641	8.560	8.564	8.564	8.578	8.573	8.596	8.591	8.605
G/C	300.0	315.0	330.0	345.0						
0.0	224.8	225.0	224.9	224.9						
3.0	225.4	225.5	225.6	225.8						
6.0	228.2	228.5	228.8	229.1						
9.0	233.6	233.8	234.2	234.7						
12.0	240.9	241.6	242.1	242.7						
15.0	250.5	251.5	251.8	252.7						
18.0	262.4	263.3	263.7	264.6						
21.0	275.9	276.9	277.1	278.5						
24.0	290.4	291.6	292.0	293.3						
27.0	306.2	307.3	307.6	309.0						
30.0	322.7	323.5	324.1	325.3						
33.0	339.0	340.2	340.6	342.0						
36.0	355.5	356.7	357.1	358.3						
39.0	372.2	373.2	373.4	374.7						
42.0	388.1	389.3	389.3	390.5						
45.0	403.6	404.7	405.1	406.0						
48.0	418.8	419.7	419.6	420.7						
51.0	432.8	433.9	433.9	434.7						
54.0	446.3	447.3	447.3	448.0						
57.0	459.1	459.7	459.4	460.3						
60.0	470.7	470.8	471.1	471.5						
63.0	481.4	481.5	481.2	481.5						
66.0	490.5	490.8	490.5	490.8						

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 16 October 2018

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

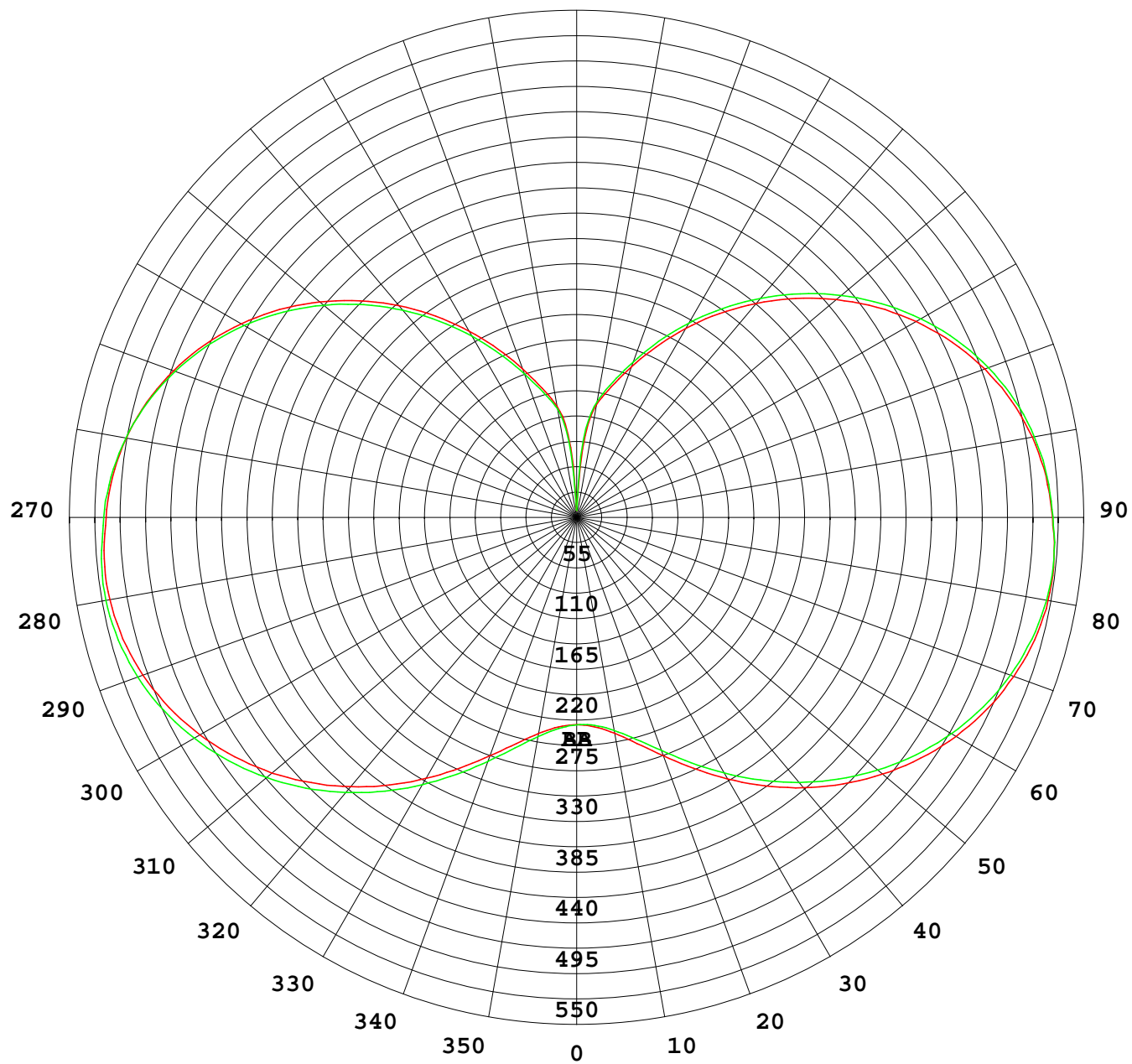
Photometric Data Table [cd]

69.0	499.1	499.0	498.3	498.3
72.0	506.0	505.9	505.3	504.4
75.0	511.4	511.3	510.4	510.0
78.0	515.6	515.1	514.4	513.5
81.0	518.6	517.9	516.7	515.9
84.0	519.6	518.8	517.7	516.6
87.0	518.7	517.6	516.3	515.0
90.0	516.1	515.0	513.6	512.6
93.0	513.9	512.6	511.4	510.1
96.0	510.2	508.8	508.0	506.4
99.0	505.6	503.8	502.3	500.7
102.0	498.8	497.2	495.7	494.1
105.0	490.6	489.1	487.3	485.5
108.0	480.6	479.6	477.7	475.6
111.0	469.8	468.1	466.8	464.5
114.0	457.3	455.8	454.0	452.1
117.0	444.0	442.2	440.7	438.1
120.0	429.0	427.3	425.9	423.6
123.0	413.1	411.4	410.0	407.6
126.0	396.2	394.6	393.2	390.7
129.0	378.5	377.0	375.4	373.1
132.0	360.3	358.5	357.0	354.5
135.0	341.2	339.4	338.0	335.4
138.0	321.4	319.5	318.3	315.9
141.0	301.5	299.6	298.6	296.2
144.0	281.2	279.4	278.6	276.3
147.0	261.3	259.1	258.7	256.0
150.0	241.1	239.0	238.5	236.0
153.0	221.0	219.2	218.9	216.3
156.0	202.0	200.0	199.8	197.4
159.0	183.3	181.3	181.5	179.2
162.0	166.0	164.2	164.4	162.2
165.0	150.0	147.8	146.2	144.3
168.0	133.5	131.8	129.9	127.9
171.0	119.0	117.4	116.5	111.2
174.0	91.41	89.42	88.37	86.57
177.0	29.62	26.29	25.46	21.90
180.0	8.610	8.632	8.637	8.646

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LUC
Test Date: 16 October 2018

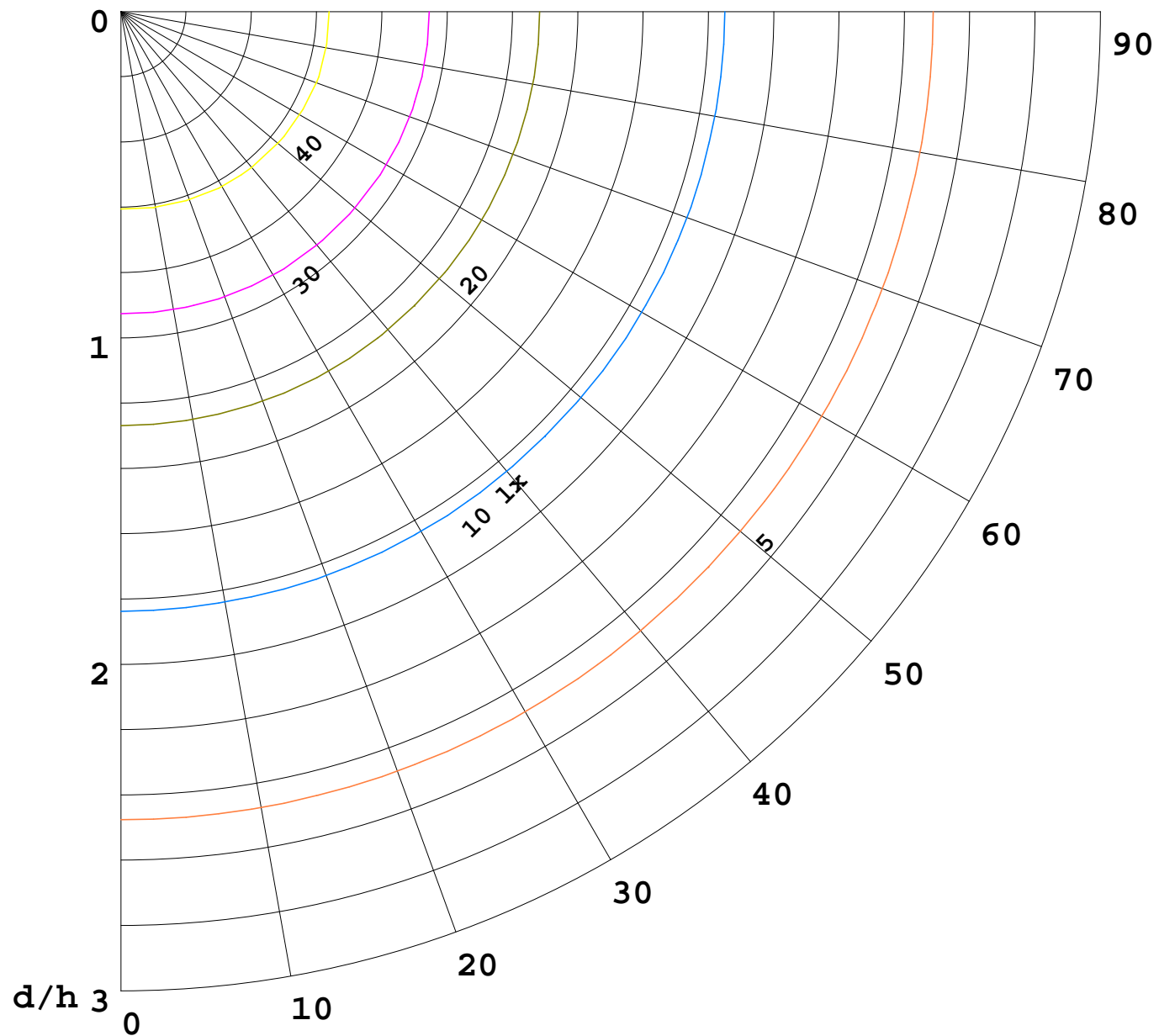
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks: OBB-36W L+ -5700K

I(cd)



1000 lm

$K = 1$



F = 1000 lm
 K = 0.7
 H_{cc} = 0.8 m
 H_{fc} = 0.0 m
 E_{ave} = 100 lx

	P_{cc}	P_w	P_{fc}
—————	70	50	30
—————	50	30	20

