

Report No.: PKS200616100-10

Test Time: 2020/6/14 17:23

Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Luminaire Description: 4尺

Lamp Description:

Lumens per Lamp:

Luminous Width (mm):

Voltage: 120.0 V

Power: 43.42 W

Lamp Catalog:

Number of Lamps:

Luminous Length (mm):

Luminous Height (mm):

Current: 0.364 A

Power Factor: 0.993

Photometric Results

CIE Class: Semi-Direct

Measurement Flux: 2924.9 lm

Downward Ratio: 87%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 163.6, 270.6, 242.2, 241.5

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.7, 146.1, 134.7, 134.9

Luminaire Efficacy Rating (LER): 67.41

Max. Intensity: 691.6 cd

S/MH(C0/C180): 1.26

Total Rated Lamp Lumens: 2924.9 lm

Efficiency: 100%

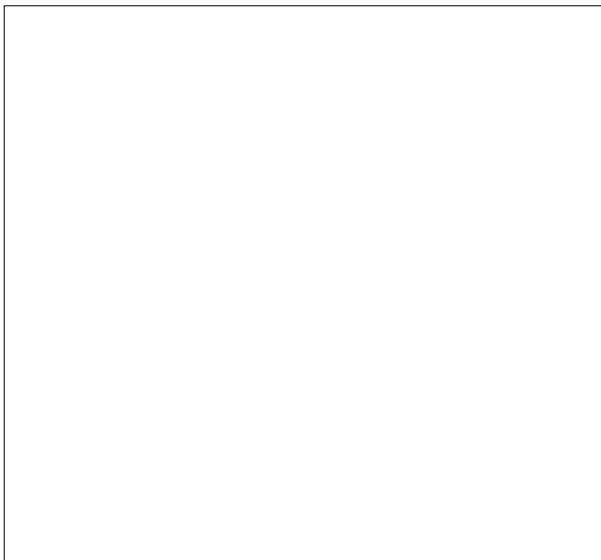
Upward Ratio: 13%

C0r0 Intensity: 676.8 cd

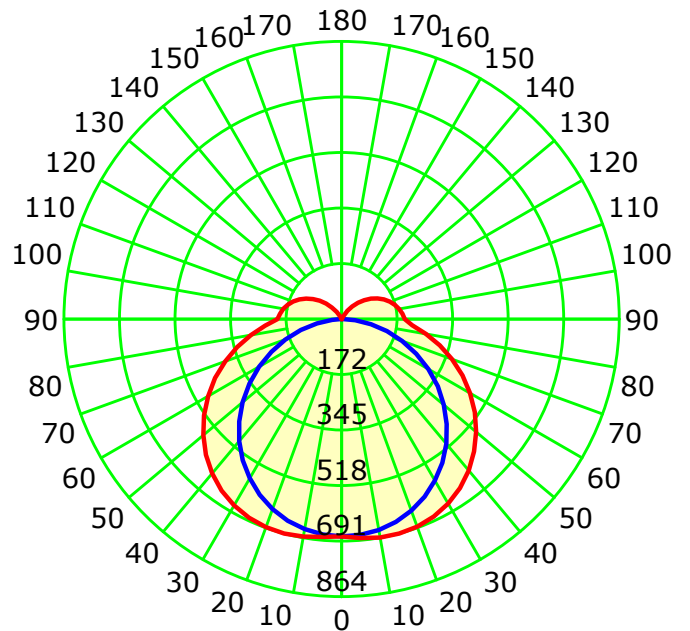
Pos of Max. Intensity: H270 V15

S/MH(C90/C270): 1.46

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 129.9°

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 22.5

Test Lab: BACL

Test Type: TYPE C

Temperature: 25.1 °C

Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0

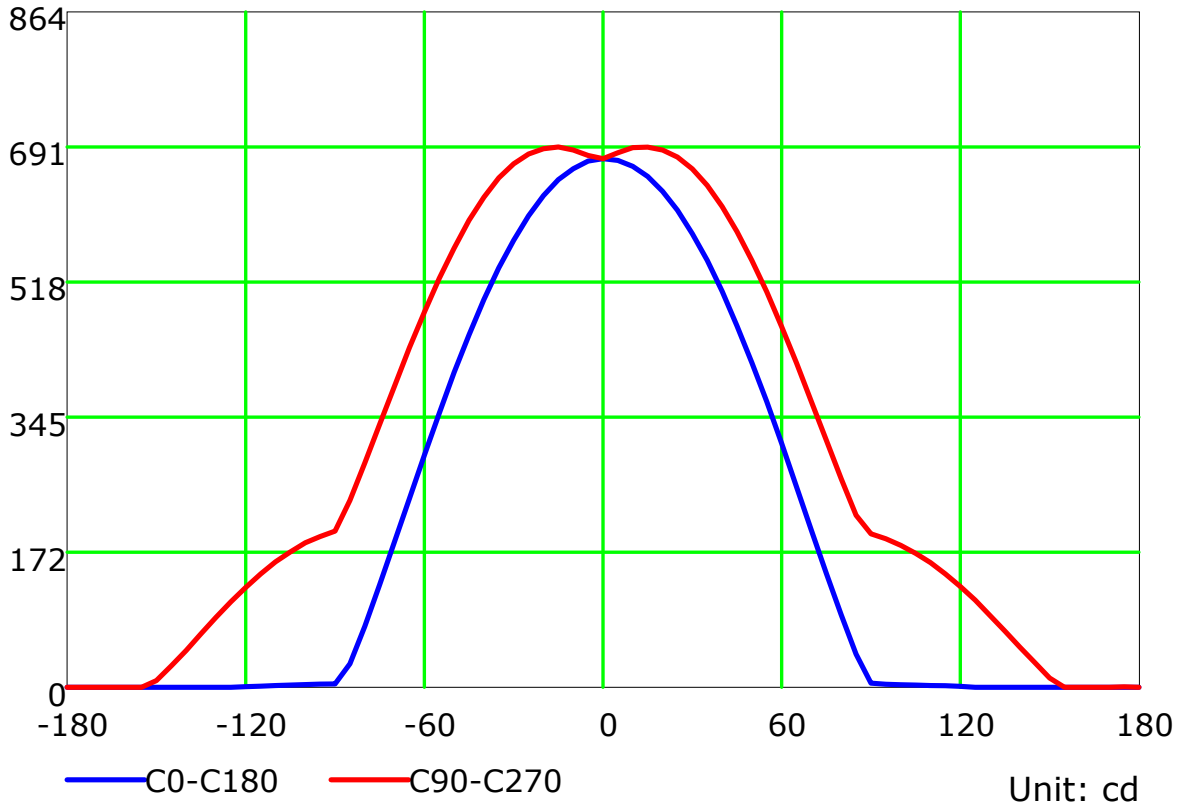
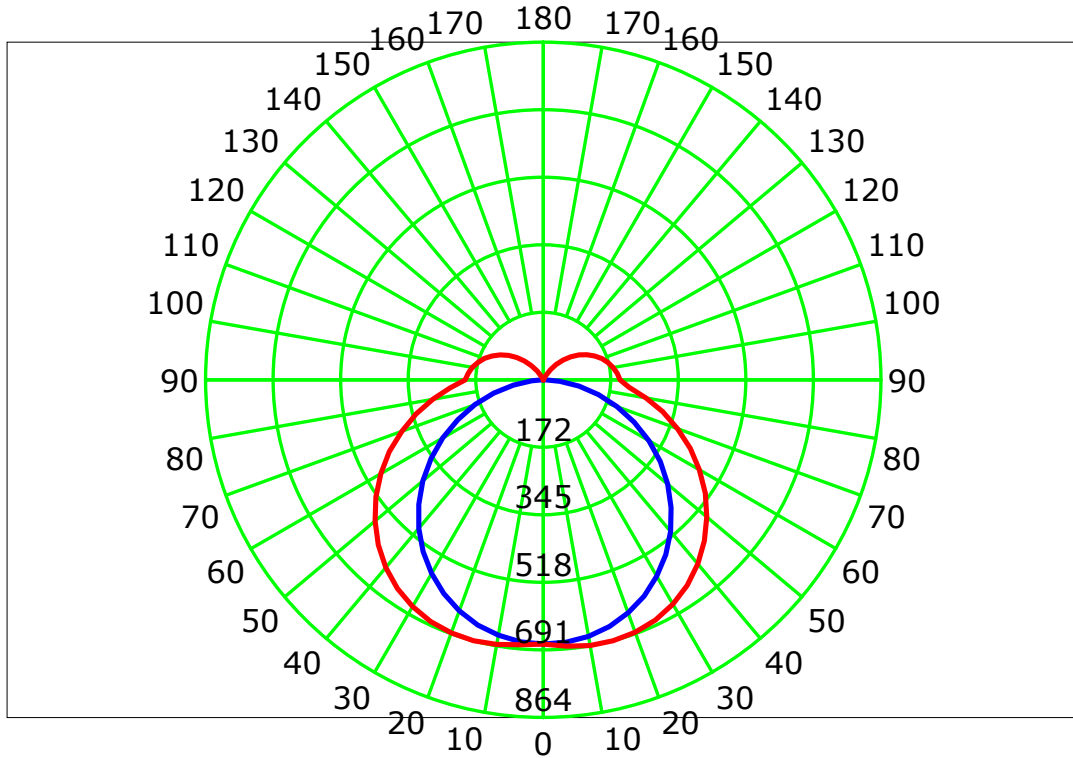
Test Device: GPM-1900

Distance: 14.073 m

Humidity: 48

Inspector:

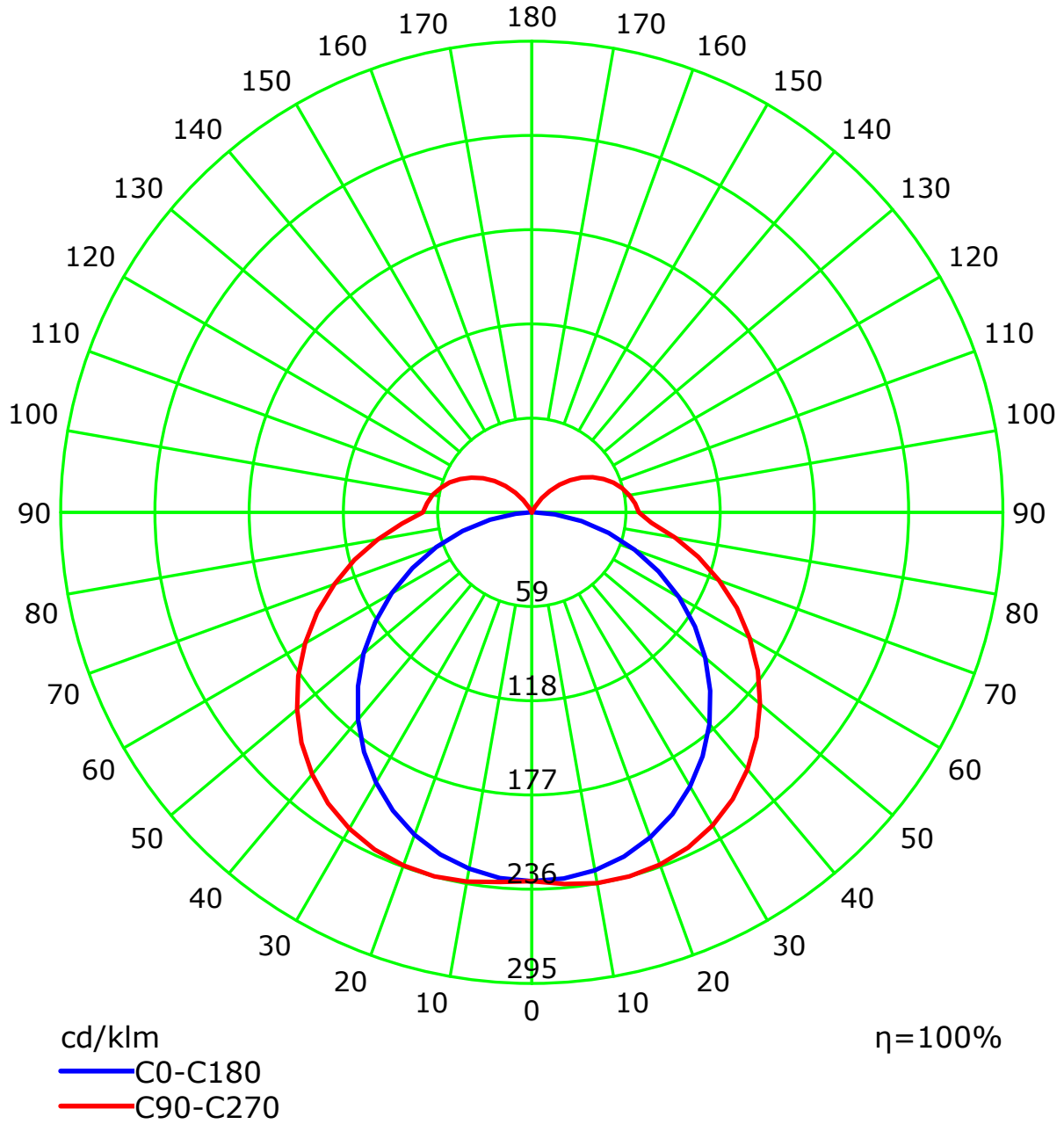
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5
Test Lab: BACL
Test Type: TYPE C
Temperature: 25.1 'C
Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
Test Device: GPM-1900
Distance: 14.073 m
Humidity: 48
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



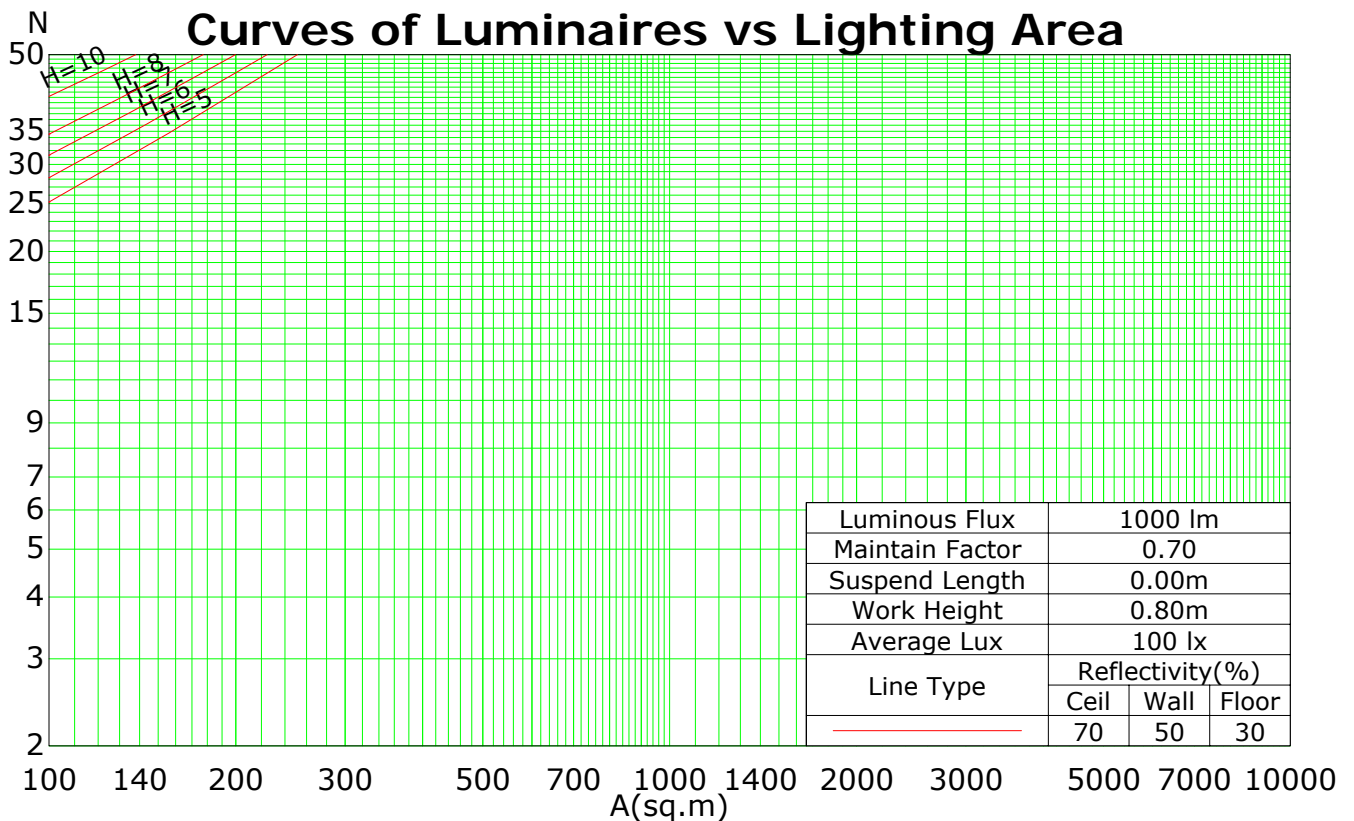
C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector:

Coefficients Of Utilization - Zonal Cavity Method

RC	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.3	0.3	0.3	0.1	0.1	0.1	0
RW	0.7	0.5	0.3	0.1	0.7	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0
RCCR	RF = 0.2																	
0	1.16	1.16	1.16	1.16	1.12	1.12	1.12	1.12	1.04	1.04	1.04	.97	.97	.97	.90	.90	.90	.87
1	1.03	.98	.93	.88	.99	.94	.90	.85	.87	.84	.80	.81	.78	.75	.75	.73	.71	.68
2	.93	.84	.76	.70	.89	.81	.74	.68	.75	.69	.64	.70	.65	.61	.65	.61	.58	.55
3	.84	.73	.64	.57	.81	.70	.62	.56	.65	.58	.53	.61	.55	.50	.56	.52	.48	.45
4	.77	.64	.55	.47	.73	.62	.53	.46	.57	.50	.44	.54	.47	.42	.50	.45	.40	.38
5	.70	.57	.47	.40	.67	.55	.46	.39	.51	.44	.38	.48	.41	.36	.45	.39	.35	.32
6	.65	.51	.41	.35	.62	.49	.40	.34	.46	.38	.33	.43	.36	.31	.40	.35	.30	.28
7	.60	.46	.37	.30	.57	.44	.36	.30	.42	.34	.29	.39	.33	.28	.37	.31	.27	.24
8	.56	.42	.33	.27	.53	.40	.32	.26	.38	.31	.25	.36	.29	.25	.34	.28	.24	.21
9	.52	.38	.30	.24	.50	.37	.29	.24	.35	.28	.23	.33	.26	.22	.31	.25	.21	.19
10	.48	.35	.27	.22	.47	.34	.26	.21	.32	.25	.21	.30	.24	.20	.29	.23	.19	.17

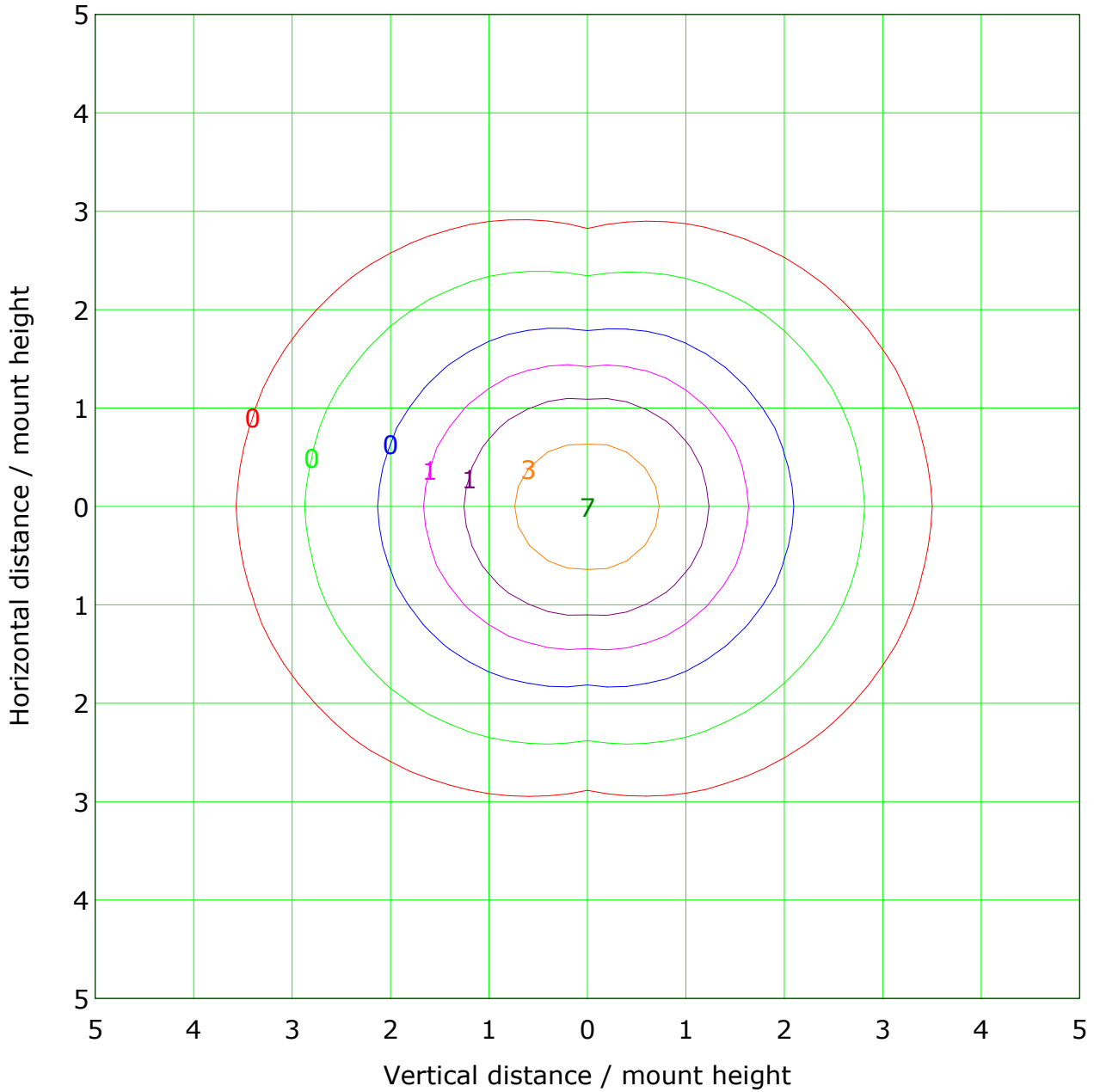
Spacing Criteria (0-180): 1.26
 Spacing Criteria (90-270): 1.46
 Spacing Criteria (Diagonal): 1.51



C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 6.8 lx

— (1%): 0.1 lx	— (2%): 0.1 lx
— (5%): 0.3 lx	— (10%): 0.7 lx
— (20%): 1.4 lx	— (50%): 3.4 lx
— (100%): 6.8 lx	

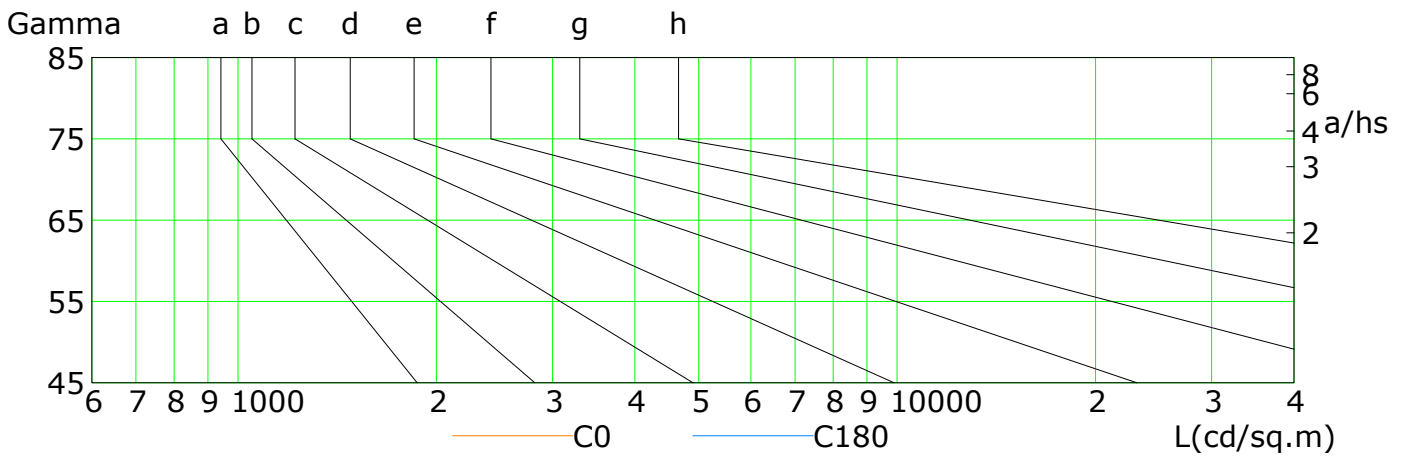
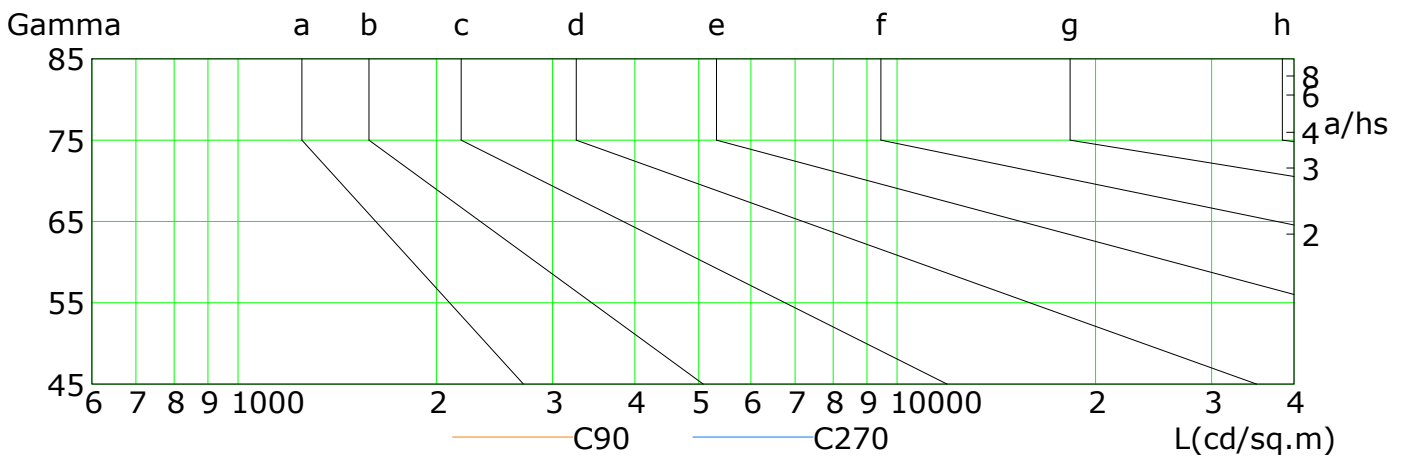
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Test Lab: BACL
Test Type: TYPE C
Temperature: 25.1 'C
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Gamma Plane (°):0.0-180.0:5.0
Test Device: GPM-1900
Distance: 14.073 m
Humidity: 48
Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		2000	1000	500	<=300				
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300

a b c d e f g h

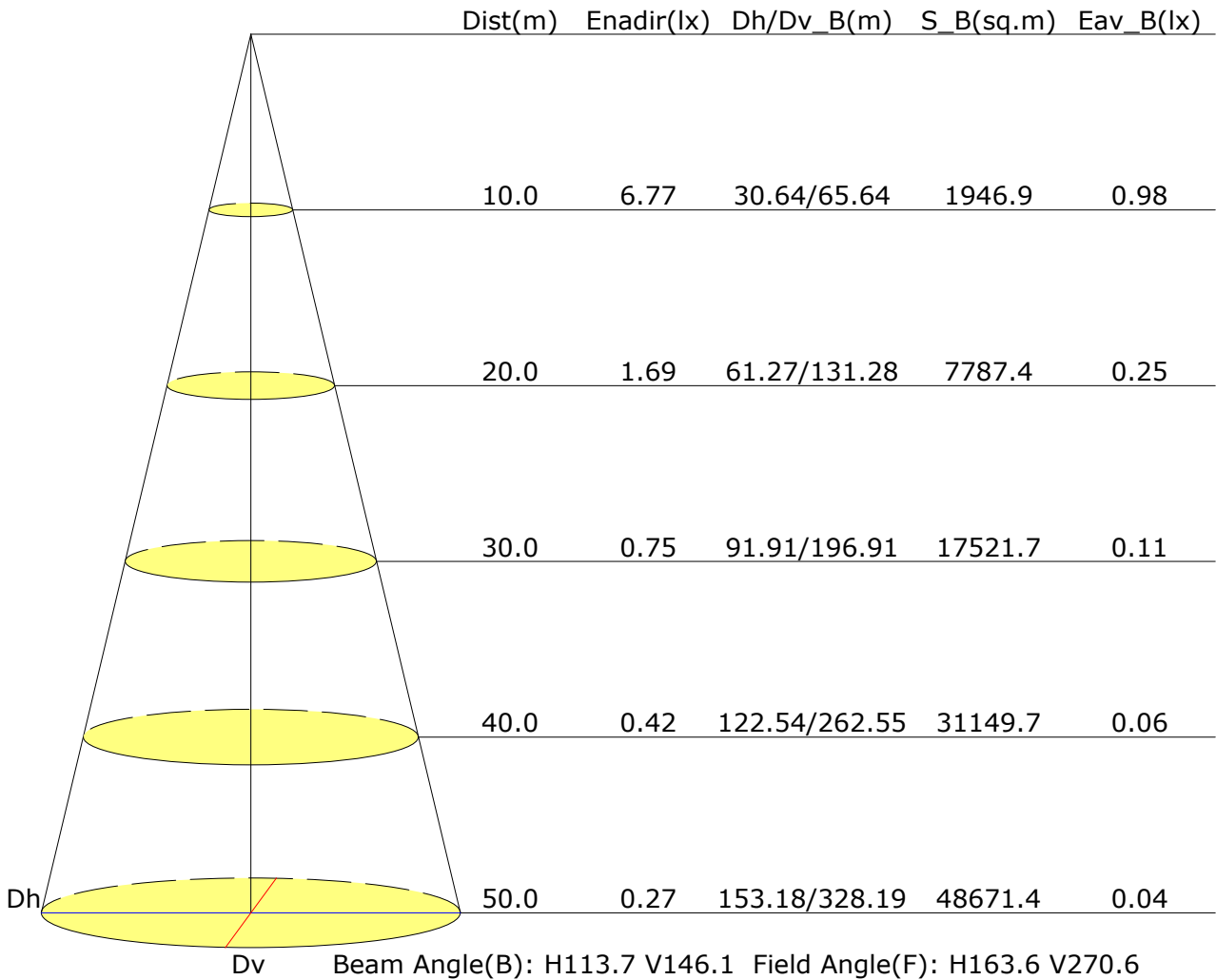


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	463	416	366	312	257	201	146	93	43
C90	583	547	506	462	415	366	316	267	220
C180	451	403	351	297	242	187	132	78	30
C270	598	562	523	480	435	386	337	287	239

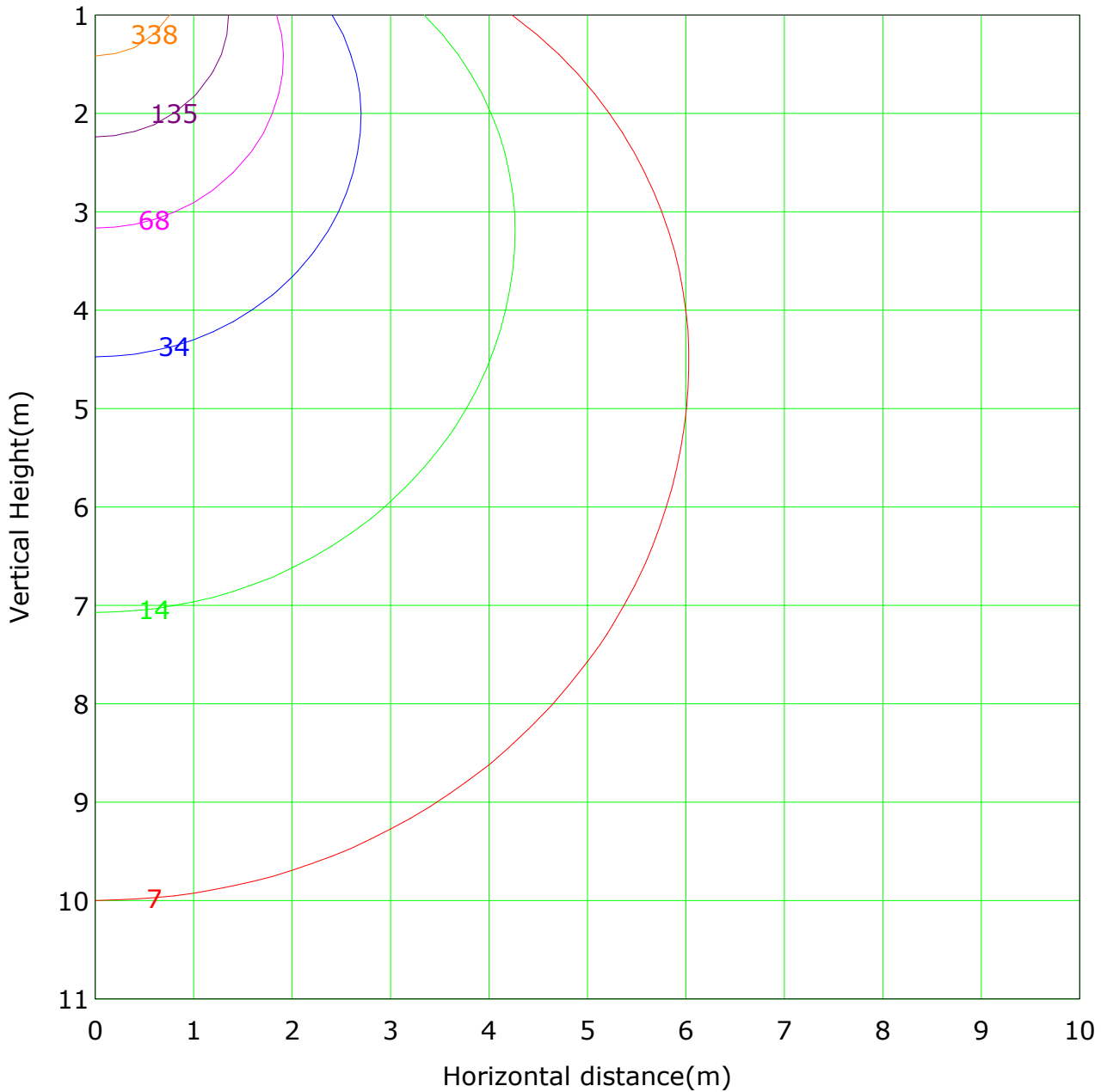
C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 676.8 lx

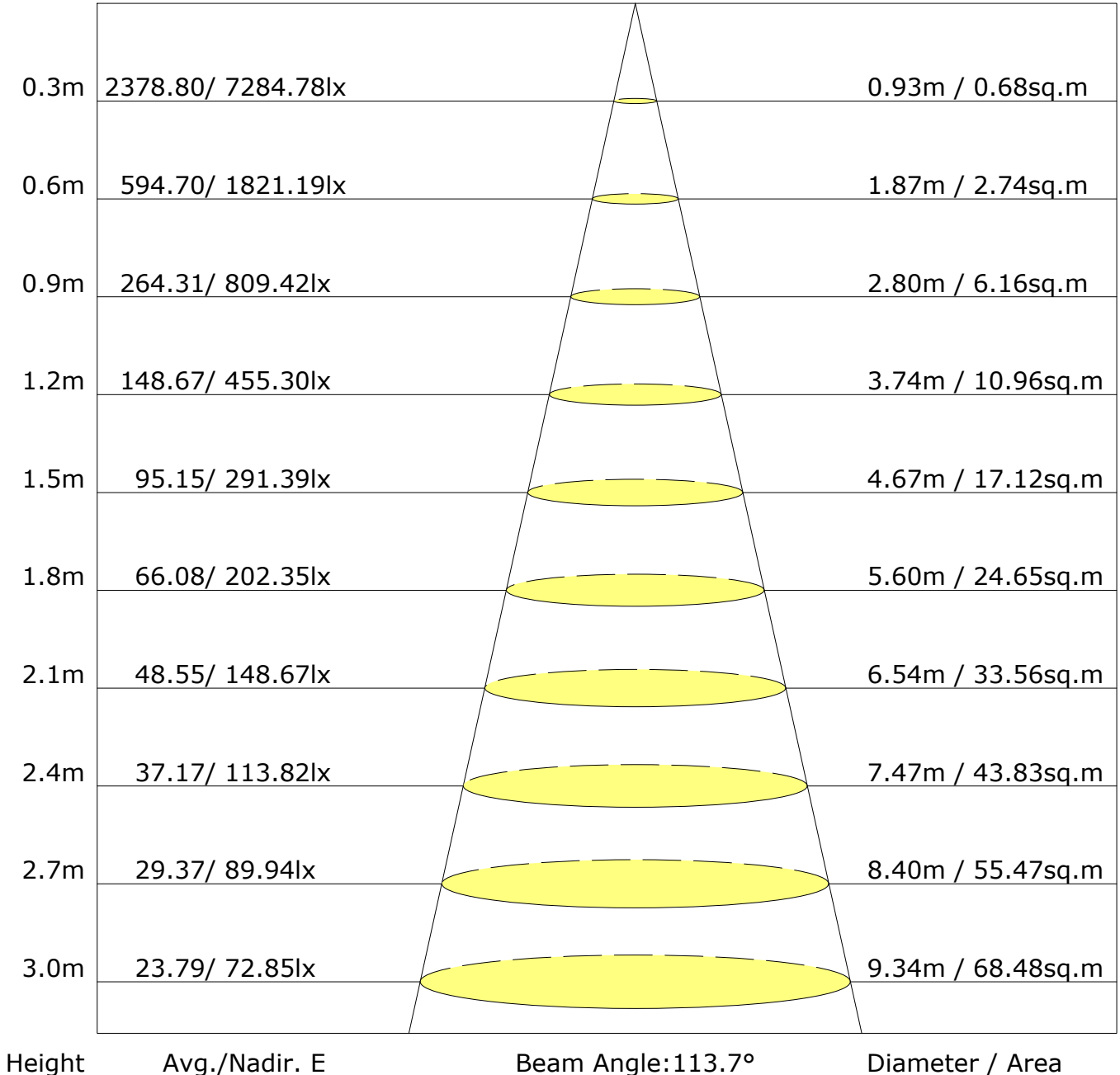
— (1%): 6.8 lx	— (2%): 13.5 lx
— (5%): 33.8 lx	— (10%): 67.7 lx
— (20%): 135.4 lx	— (50%): 338.4 lx
— (100%): 676.8 lx	

C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector:

The Average Illuminance Effective Figure

Flux Out: 1629.05lm



C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector:

UGR Table

Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference 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	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
3H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
12H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
X=4H Y=2H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
3H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
12H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
X=8H Y=4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
12H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
X=12H Y=4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
Variations with the observer position at spacings:										
S=1.0H	-1.\$/-1.\$					-1.\$/-1.\$				
S=1.5H	-1.\$/-1.\$					-1.\$/-1.\$				
S=2.0H	-1.\$/-1.\$					-1.\$/-1.\$				

Calculate in accordance with CIE Pub.117. The table is revised with 2925lm ($8\log(F/F_0) = 3.7$).

Zonal Lumen

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-5.0	677.8	16.2	16.2	0.55	0.55
5.0-10.0	679.0	48.6	64.8	1.66	2.22
10.0-15.0	677.0	80.3	145.1	2.75	4.96
15.0-20.0	670.0	110.4	255.5	3.78	8.74
20.0-25.0	657.7	138.0	393.5	4.72	13.45
25.0-30.0	640.0	162.0	555.5	5.54	18.99
30.0-35.0	617.0	181.7	737.2	6.21	25.20
35.0-40.0	588.5	196.4	933.6	6.71	31.92
40.0-45.0	555.0	205.5	1139.1	7.03	38.95
45.0-50.0	516.9	208.9	1348.0	7.14	46.09
50.0-55.0	474.7	206.4	1554.4	7.06	53.15
55.0-60.0	428.8	198.2	1752.6	6.78	59.92
60.0-65.0	380.0	184.8	1937.4	6.32	66.24
65.0-70.0	329.3	166.8	2104.2	5.70	71.94
70.0-75.0	277.4	145.0	2249.2	4.96	76.90
75.0-80.0	225.8	120.8	2370.1	4.13	81.03
80.0-85.0	175.9	95.6	2465.6	3.27	84.30
85.0-90.0	135.6	74.3	2539.9	2.54	86.84
90.0-95.0	117.2	64.2	2604.1	2.19	89.03
95.0-100.0	111.6	60.6	2664.7	2.07	91.10
100.0-105.0	104.2	55.8	2720.5	1.91	93.01
105.0-110.0	95.0	49.6	2770.1	1.70	94.71
110.0-115.0	84.1	42.6	2812.7	1.46	96.16
115.0-120.0	72.0	35.0	2847.7	1.20	97.36
120.0-125.0	59.2	27.4	2875.0	0.94	98.30
125.0-130.0	46.6	20.3	2895.3	0.69	98.99
130.0-135.0	35.0	14.1	2909.4	0.48	99.47
135.0-140.0	24.0	8.9	2918.3	0.30	99.78
140.0-145.0	13.8	4.6	2922.9	0.16	99.93
145.0-150.0	5.7	1.7	2924.6	0.06	99.99
150.0-155.0	1.1	0.3	2924.9	0.01	100.00
155.0-160.0	0.0	0.0	2924.9	0.00	100.00
160.0-165.0	0.0	0.0	2924.9	0.00	100.00
165.0-170.0	0.0	0.0	2924.9	0.00	100.00
170.0-175.0	0.1	0.0	2924.9	0.00	100.00
175.0-180.0	0.1	0.0	2924.9	0.00	100.00

C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector:

Candlepower Table

Unit: cd

G\C	C0.0	C22.5	C45.0	C67.5	C90.0	C112.5	C135.0	C157.5	C180.0	C202.5
G0.0	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8
G5.0	674.5	678.5	682.2	683.8	684.4	684.5	681.5	678.7	673.6	672.7
G10.0	667.0	674.4	682.6	688.5	690.8	688.2	681.4	674.2	663.9	670.1
G15.0	654.0	666.6	679.2	688.1	691.6	687.1	676.8	665.8	650.0	661.3
G20.0	634.9	652.1	670.0	682.5	687.8	682.0	667.0	650.9	629.5	646.8
G25.0	610.8	633.1	655.0	671.6	678.8	672.0	651.9	630.1	603.7	627.1
G30.0	580.7	607.9	636.1	655.5	663.6	655.4	631.6	604.7	572.3	602.9
G35.0	546.6	577.6	610.7	632.8	642.6	633.0	605.6	573.4	537.0	573.1
G40.0	507.1	544.1	580.5	604.9	615.6	604.8	574.9	537.4	496.5	538.8
G45.0	462.8	504.7	544.2	572.2	583.4	571.1	538.3	497.5	451.2	499.7
G50.0	415.6	463.1	503.1	534.5	546.5	533.7	498.9	454.2	403.3	457.7
G55.0	365.7	416.6	458.7	492.8	506.3	491.4	453.6	406.0	350.9	411.4
G60.0	312.4	366.2	411.0	446.7	461.6	445.7	406.5	355.5	297.1	362.1
G65.0	256.7	313.9	360.6	399.3	415.2	398.2	356.9	301.9	241.8	310.2
G70.0	200.9	259.6	310.0	350.5	365.6	347.3	305.8	249.1	186.8	256.0
G75.0	146.0	205.9	257.9	299.9	316.5	297.3	252.7	195.6	131.6	202.1
G80.0	92.9	154.0	208.5	250.4	267.0	246.4	202.6	143.4	78.1	150.0
G85.0	42.6	103.6	160.5	202.4	220.3	199.6	154.8	93.7	30.2	99.9
G90.0	5.3	69.1	131.8	176.5	196.6	176.0	130.0	65.6	4.4	67.9
G95.0	4.1	64.0	126.6	171.1	190.2	170.5	124.9	60.6	4.1	62.9
G100.0	3.5	57.4	120.1	164.0	181.7	162.2	117.4	53.8	3.6	55.4
G105.0	3.0	49.0	111.6	154.4	171.6	153.0	108.2	45.1	2.9	45.4
G110.0	2.5	38.8	100.7	143.9	159.6	141.2	97.4	34.9	2.4	34.4
G115.0	2.1	28.4	88.1	130.7	145.2	127.6	84.4	23.8	1.5	22.7
G120.0	1.3	17.3	73.7	115.1	129.1	112.5	70.6	13.1	0.8	12.1
G125.0	0.0	6.7	58.9	98.0	111.8	95.2	55.4	3.2	0.0	2.7
G130.0	0.0	0.0	43.4	79.9	92.0	76.7	40.0	0.0	0.0	0.0
G135.0	0.0	0.0	28.9	61.1	71.9	57.4	24.2	0.0	0.0	0.0
G140.0	0.0	0.0	15.3	43.0	51.4	38.5	8.8	0.0	0.0	0.0
G145.0	0.0	0.0	3.9	25.5	31.8	19.2	0.0	0.0	0.0	0.0
G150.0	0.0	0.0	0.0	8.8	12.0	1.8	0.0	0.0	0.0	0.0
G155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G175.0	0.0	0.0	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0
G180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

C Plane (°):0.0-360.0: 22.5

Test Lab: BACL

Test Type: TYPE C

Temperature: 25.1 'C

Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0

Test Device: GPM-1900

Distance: 14.073 m

Humidity: 48

Inspector:

Candlepower Table (Continue 1)

Unit: cd

G\C	C225.0	C247.5	C270.0	C292.5	C315.0	C337.5	C360.0			
G0.0	676.8	676.8	676.8	676.8	676.8	676.8	676.8			
G5.0	677.1	679.6	681.0	680.4	676.7	672.9	674.5			
G10.0	679.1	685.4	687.9	685.3	677.8	669.0	667.0			
G15.0	675.9	686.6	691.6	687.5	675.1	660.5	654.0			
G20.0	669.0	683.0	689.4	683.4	667.3	647.6	634.9			
G25.0	654.8	673.8	682.7	675.5	653.6	627.6	610.8			
G30.0	637.0	660.2	670.2	661.2	635.6	603.8	580.7			
G35.0	613.2	639.8	652.1	641.6	611.2	574.1	546.6			
G40.0	584.0	614.0	627.4	615.9	582.9	540.2	507.1			
G45.0	549.2	583.2	597.8	585.4	548.9	501.0	462.8			
G50.0	510.2	547.0	562.3	549.6	511.1	459.1	415.6			
G55.0	466.5	507.0	523.5	509.3	468.5	413.0	365.7			
G60.0	419.7	461.9	480.4	465.6	422.2	364.5	312.4			
G65.0	370.6	415.5	435.0	418.7	373.7	313.3	256.7			
G70.0	318.6	366.1	385.9	368.8	324.0	260.4	200.9			
G75.0	267.3	315.2	337.0	317.8	272.1	207.8	146.0			
G80.0	215.3	264.7	287.4	266.7	220.5	155.6	92.9			
G85.0	167.5	216.9	239.5	217.8	170.4	104.8	42.6			
G90.0	132.8	180.2	200.1	178.6	132.3	68.1	5.3			
G95.0	127.8	173.4	193.0	172.5	126.7	62.9	4.1			
G100.0	120.9	167.0	185.0	165.7	120.3	56.2	3.5			
G105.0	111.4	157.8	173.4	156.2	110.5	46.3	3.0			
G110.0	98.9	145.3	160.8	144.1	98.9	34.9	2.5			
G115.0	84.4	129.6	145.2	129.4	85.0	24.0	2.1			
G120.0	69.3	112.6	128.0	112.0	70.3	13.7	1.3			
G125.0	53.3	94.0	109.4	94.1	54.7	4.4	0.0			
G130.0	37.2	75.1	89.6	75.7	39.5	0.0	0.0			
G135.0	22.1	55.4	68.7	56.4	24.5	0.0	0.0			
G140.0	7.6	36.4	47.3	37.9	9.8	0.0	0.0			
G145.0	0.0	18.1	27.5	18.8	0.0	0.0	0.0			
G150.0	0.0	2.2	8.7	3.0	0.0	0.0	0.0			
G155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
G160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
G165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
G170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
G175.0	0.0	0.0	0.0	0.8	0.0	0.7	0.0			
G180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

C Plane (°):0.0-360.0: 22.5
 Test Lab: BACL
 Test Type: TYPE C
 Temperature: 25.1 'C
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1900
 Distance: 14.073 m
 Humidity: 48
 Inspector: