

Report No.:

Test Time: 2017-07-20 18:02

## Luminaire Property

Luminaire Manufacturer:  
Luminaire Category: LED DownLight  
Lamp Catalog: 4000k  
Luminous Width (mm): 130  
Current: 0.121 A  
Power Factor: 0.968

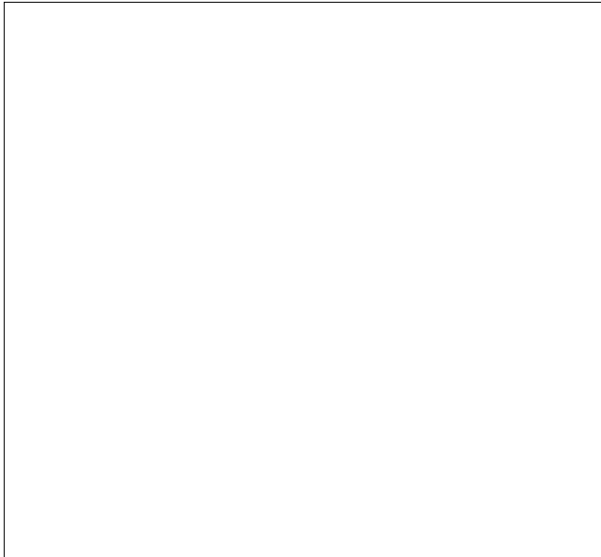
Luminaire Description: DLC0525-B840 24D  
Luminous Length (mm): 130  
Voltage: 220.0 V  
Power: 25.80 W

## Photometric Results

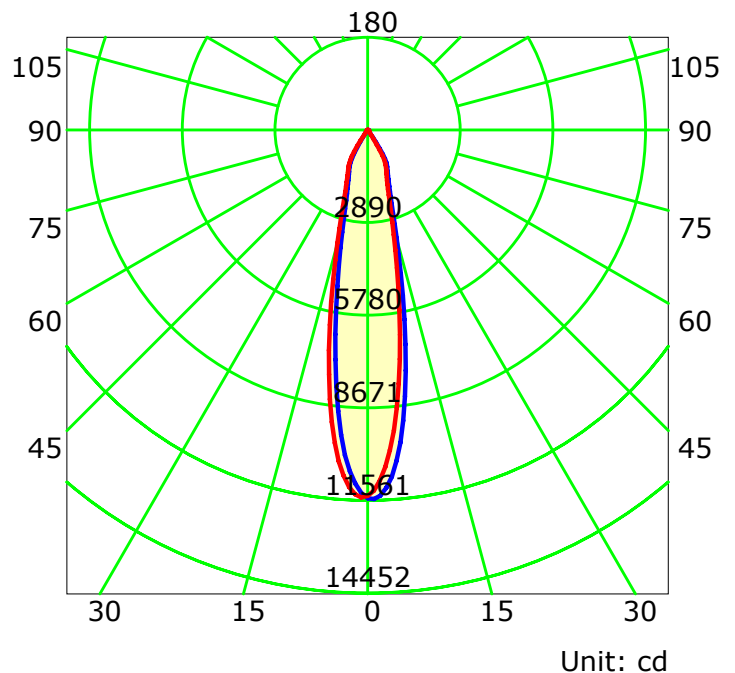
CIE Class: Direct  
Measurement Flux: 2665.2 lm  
Downward Ratio: 100%  
Field Angle: H58.0 V57.6  
Luminaire Efficacy Rating (LER): 103  
Max. Intensity: 11515.25 cd

Total Rated Lamp Lumens: 2665.2 lm  
Efficiency: 100%  
Upward Ratio: 0%  
Beam Angle: H21.3 V21.6  
Central Intensity: 11489.24 cd  
Pos of Max. Intensity: H0 V1

## Picture Of Luminaire



### Luminous Intensity Distribution Curve

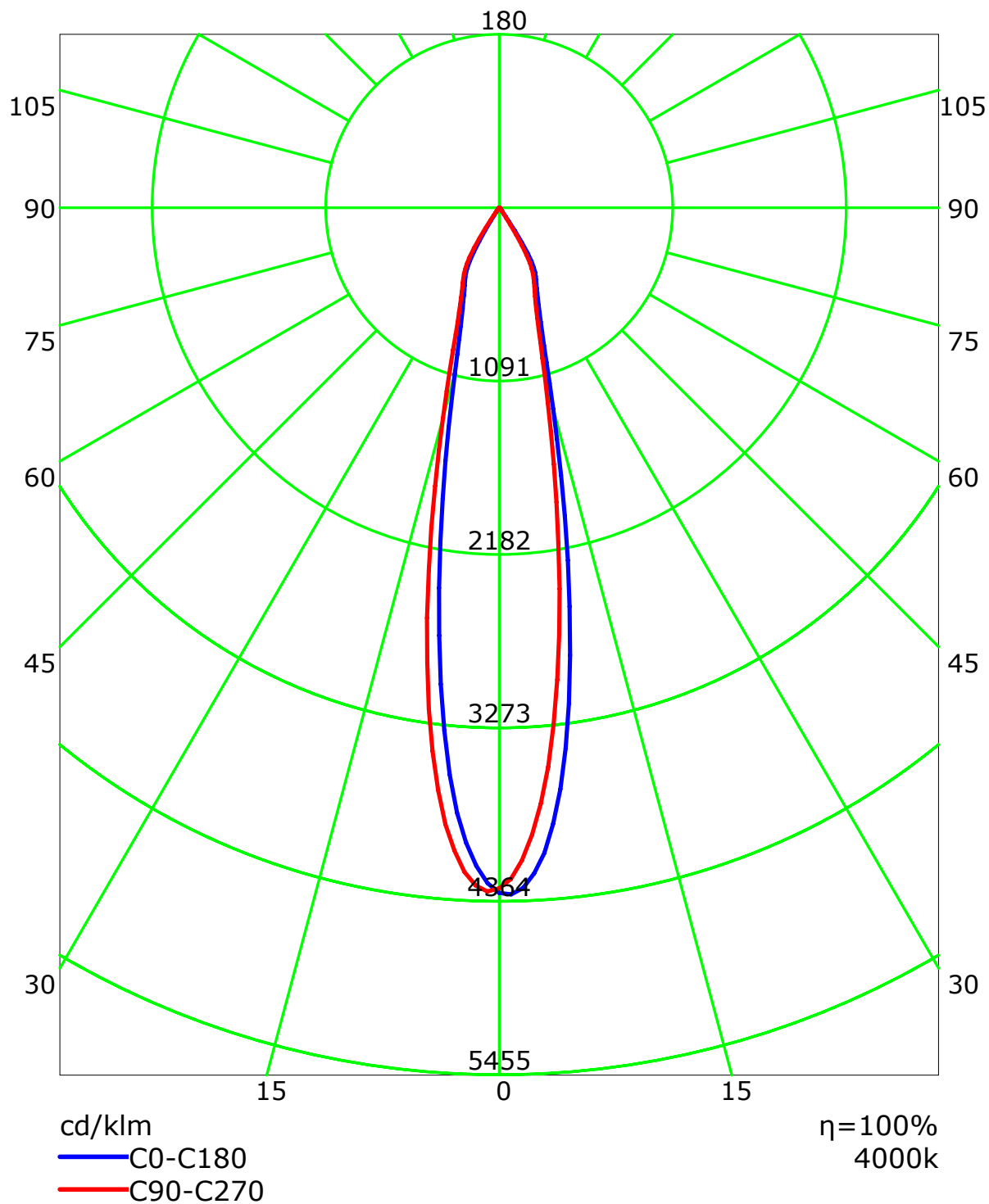


— C0-C180    — C90-C270

C Plane (°):0.0-360.0: 90.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600L  
Distance: 7.990 m  
Humidity:  
Inspector:

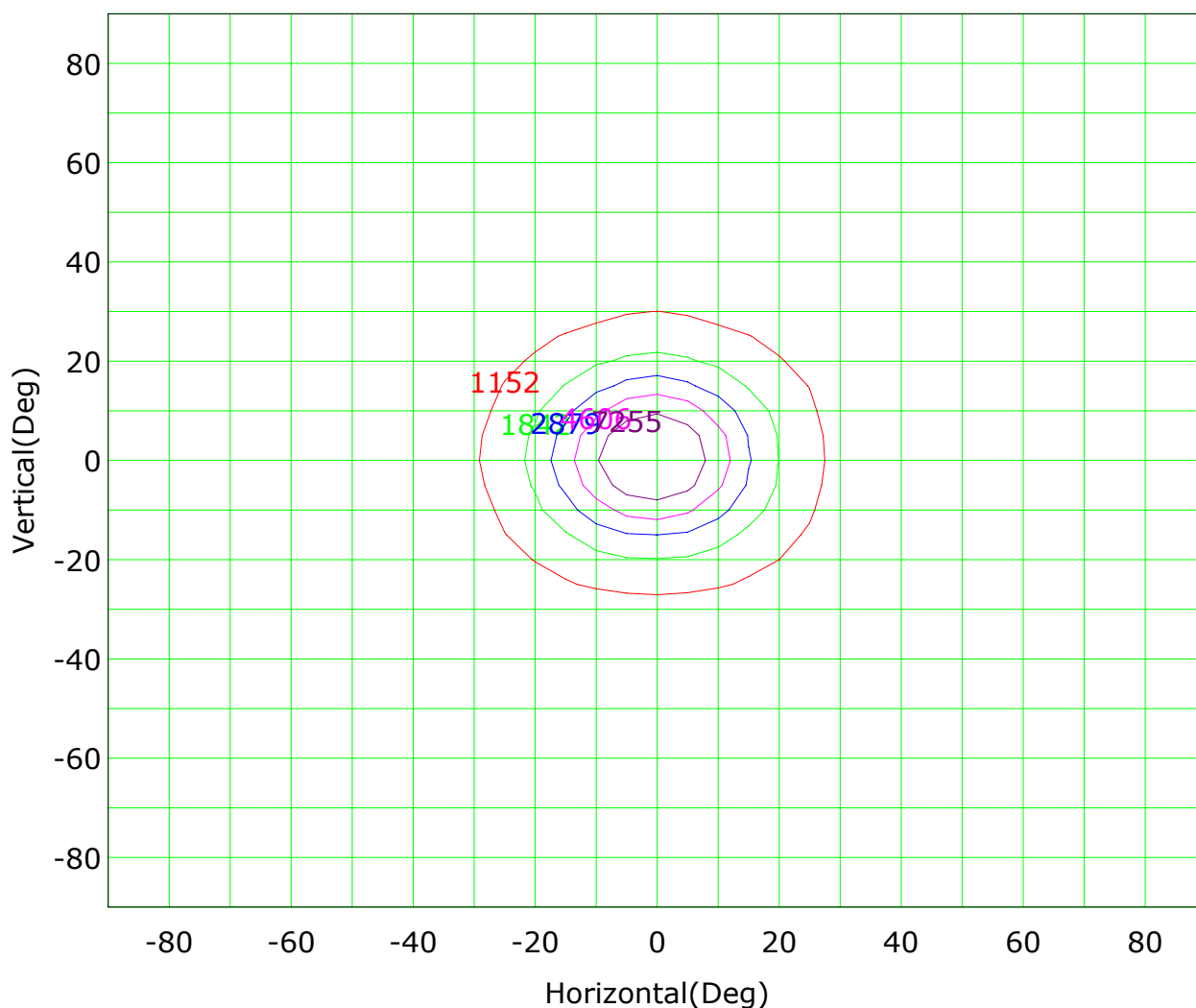
## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 90.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600L  
Distance: 7.990 m  
Humidity:  
Inspector:

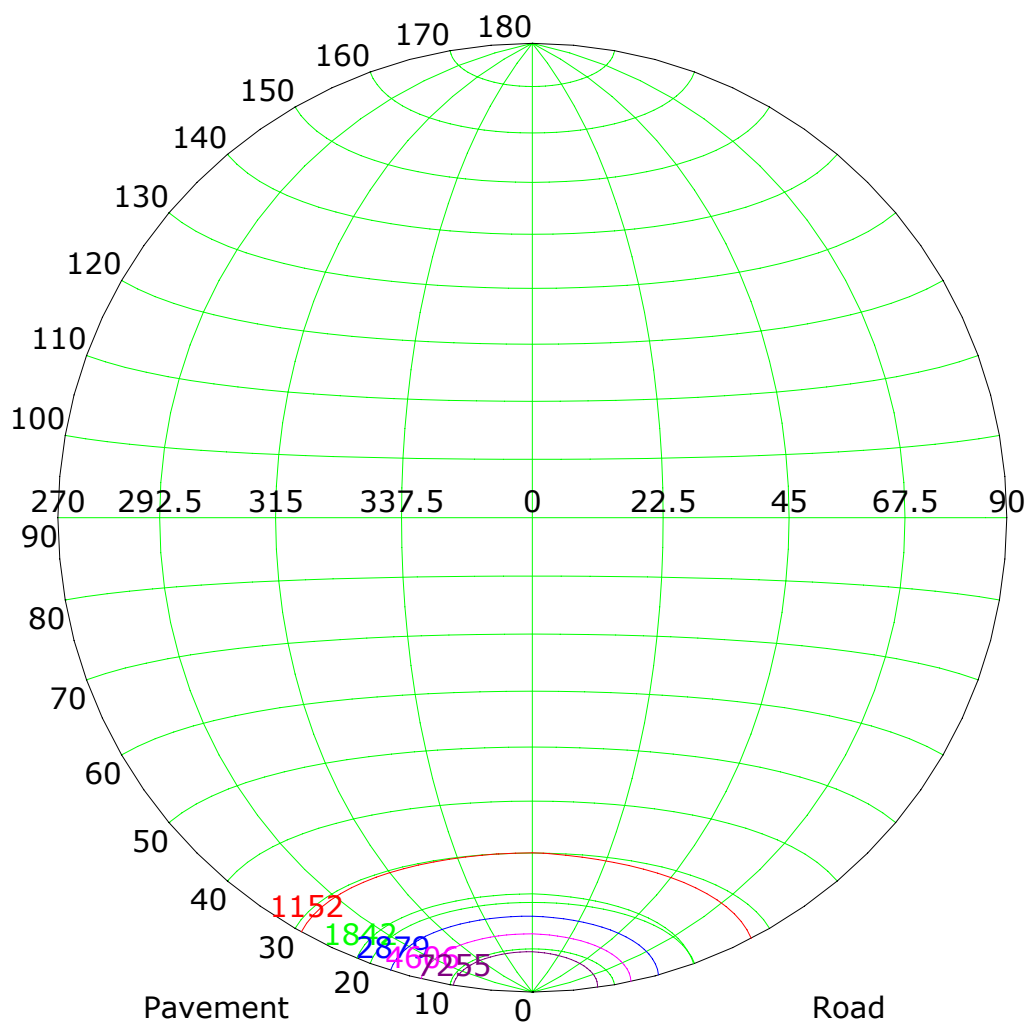
## Isocandela (rectangle)



Imax (100%): 11515 cd

( 10%): 1152 cd	( 16%): 1842 cd
( 25%): 2879 cd	( 40%): 4606 cd
( 63%): 7255 cd	(100%): 11515 cd

## Isocandela (sphere)

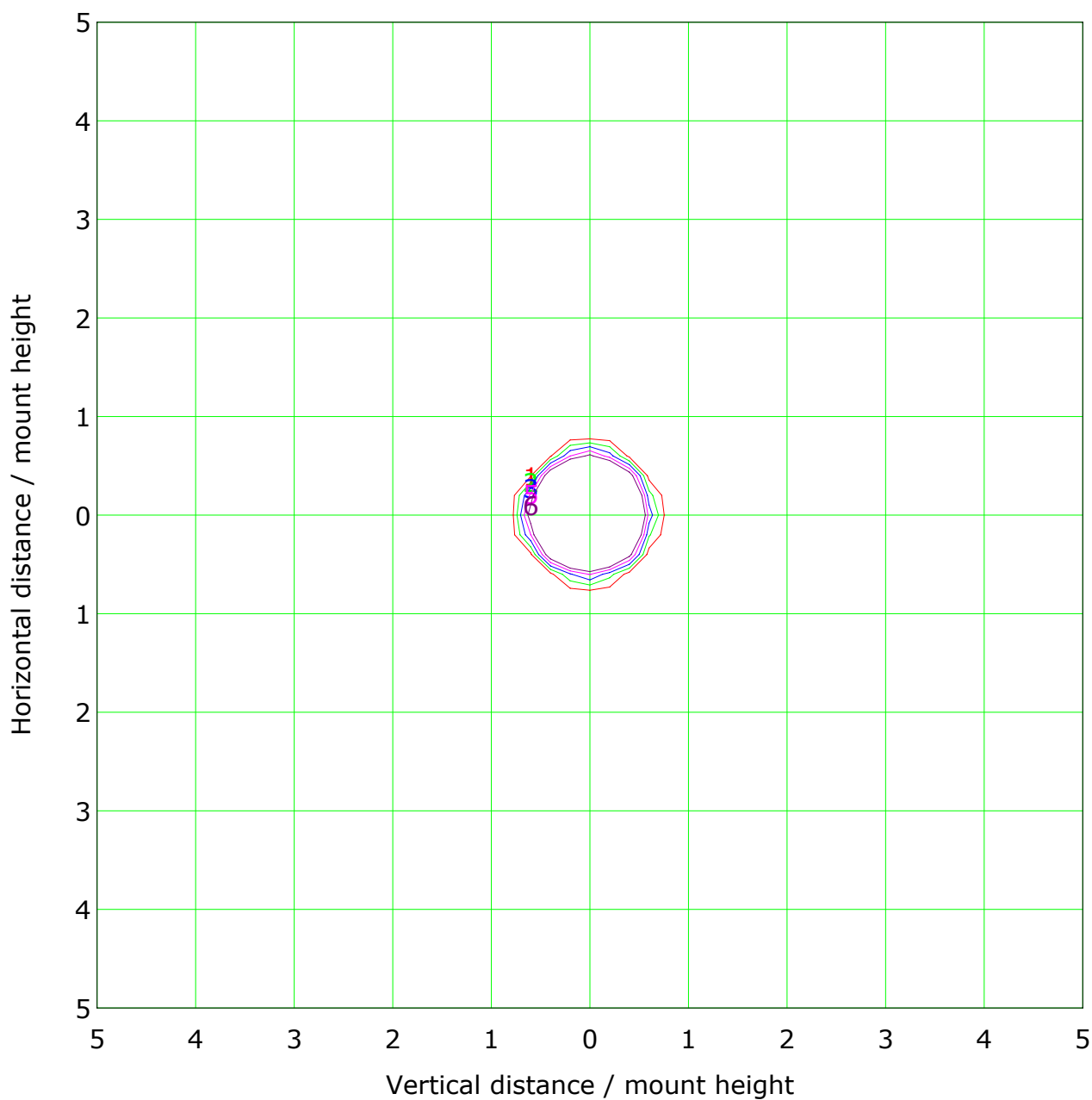


Imax (100%): 11515 cd

( 10%): 1152 cd  
( 25%): 2879 cd  
( 63%): 7255 cd

( 16%): 1842 cd  
( 40%): 4606 cd  
(100%): 11515 cd

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 115.1 lx

— ( 1%): 1.2 lx	— ( 2%): 2.3 lx
— ( 3%): 3.5 lx	— ( 4%): 4.6 lx
— ( 5%): 5.8 lx	

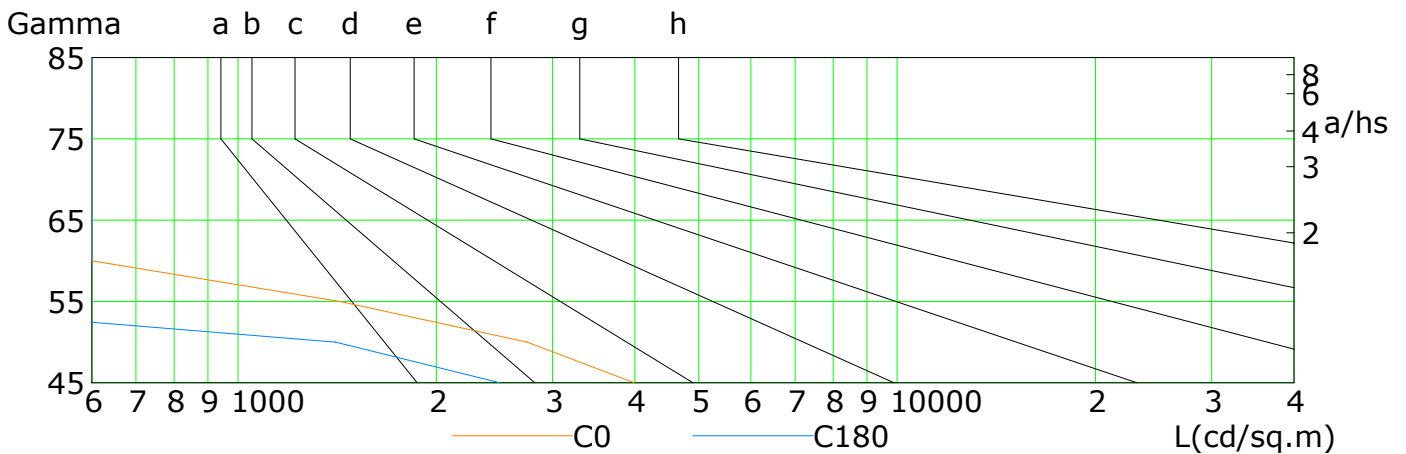
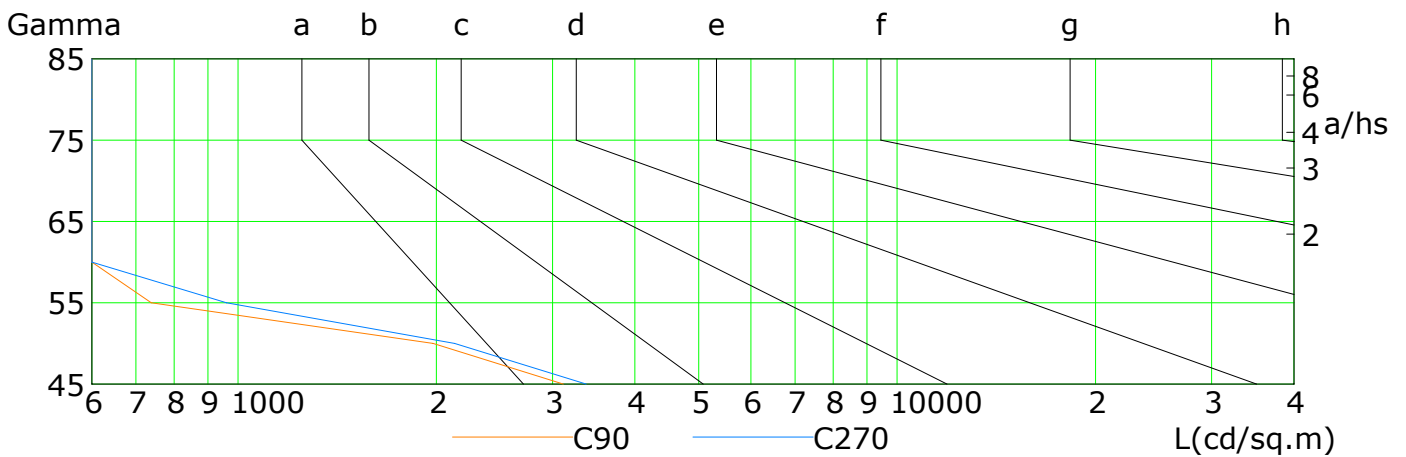
C Plane (°):0.0-360.0: 90.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600L  
Distance: 7.990 m  
Humidity:  
Inspector:

## Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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	3993	2746	1428	0	0	0	0	0	0
C90	3115	1977	739	0	0	0	0	0	0
C180	2496	1406	247	0	0	0	0	0	0
C270	3375	2131	960	0	0	0	0	0	0

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600L

Distance: 7.990 m

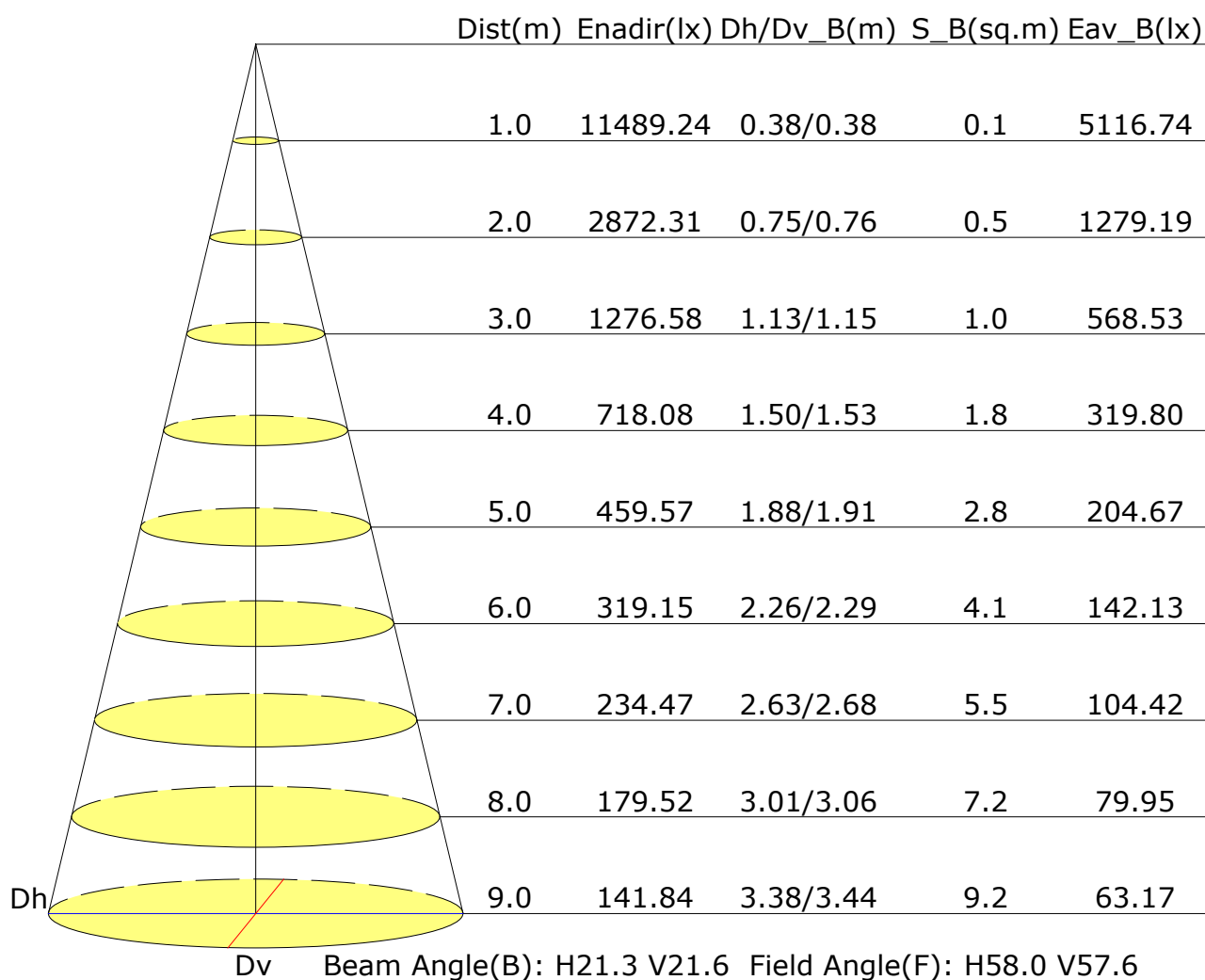
Humidity:

Inspector:

Tel:  
Fax:

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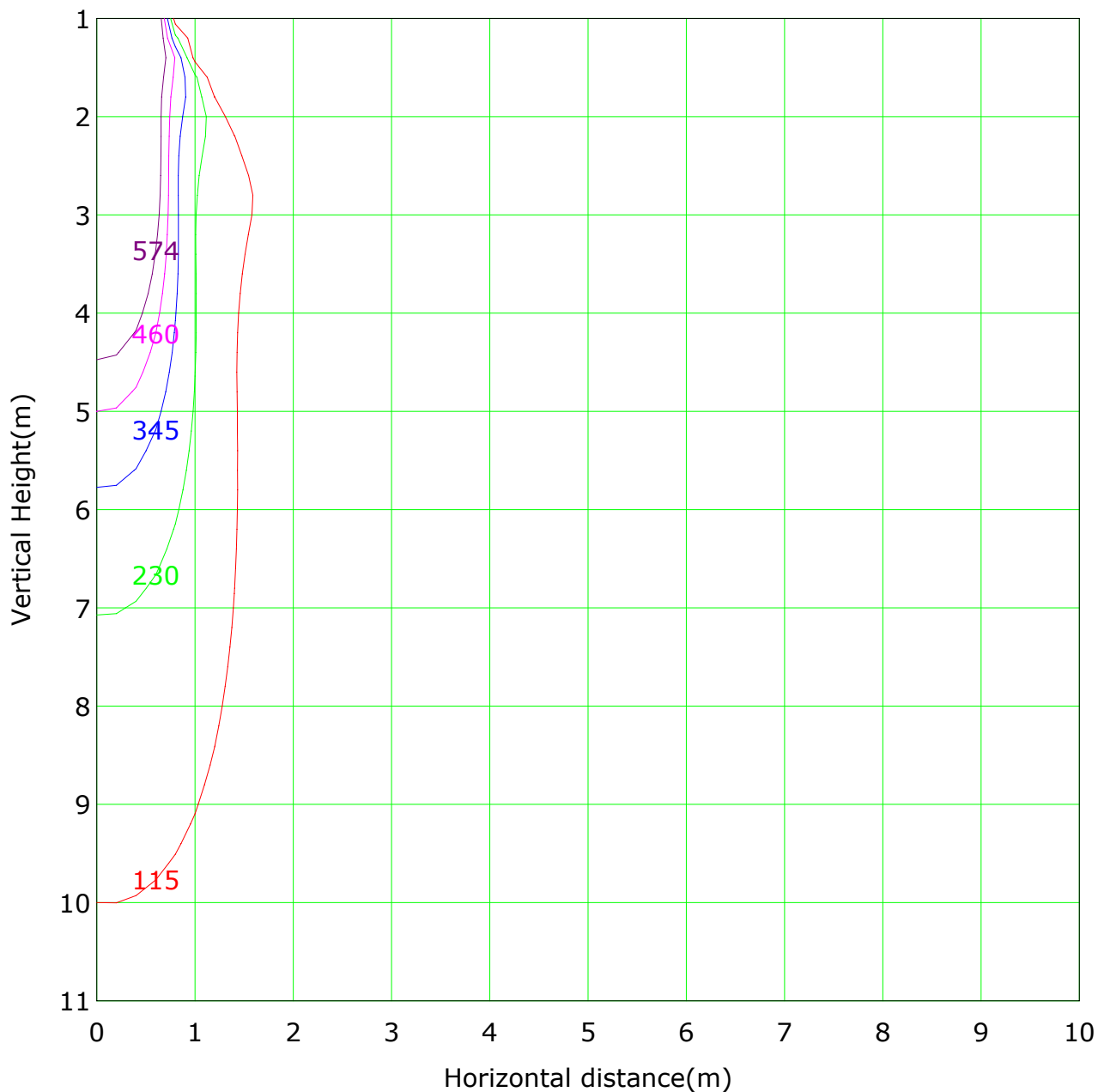
## Illuminance at a Distance



C Plane (°):0.0-360.0: 90.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600L  
Distance: 7.990 m  
Humidity:  
Inspector:

## Vertical IsoLux Plot



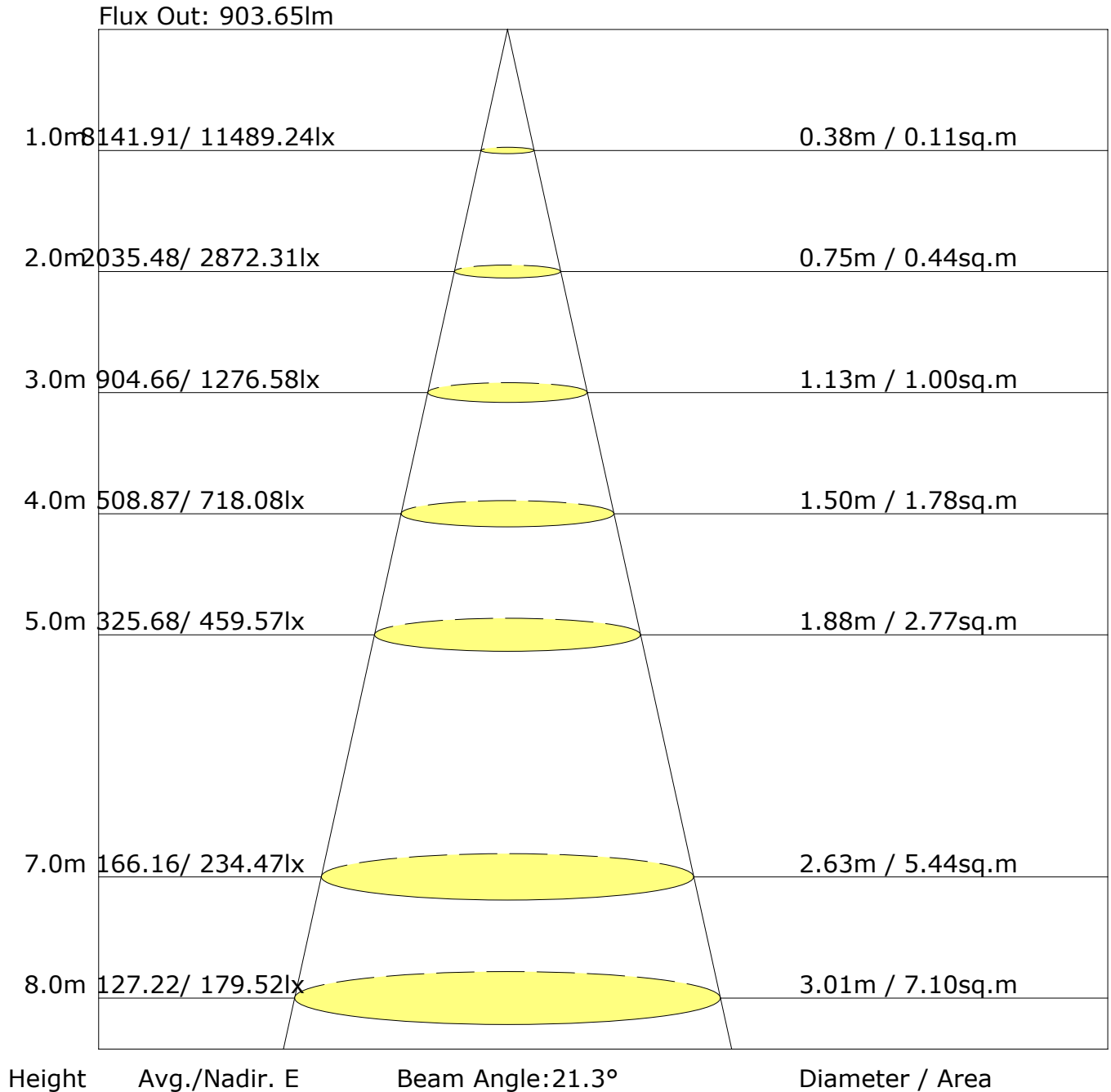
Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 11489.2 lx

( 1%): 114.9 lx  
( 3%): 344.7 lx  
( 5%): 574.5 lx

( 2%): 229.8 lx  
( 4%): 459.6 lx



## The Average Illuminance Effective Figure



## 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	-8.3	-7.4	-7.9	-7.1	-6.7	-18.0	-17.1	-17.6	-16.8	-16.5
3H	-8.5	-7.7	-8.1	-7.4	-7.0	-18.2	-17.4	-17.8	-17.1	-16.7
4H	-8.6	-7.9	-8.2	-7.5	-7.1	-18.3	-17.6	-17.9	-17.2	-16.8
6H	-8.7	-8.0	-8.3	-7.7	-7.3	-18.4	-17.8	-18.0	-17.4	-17.0
8H	-8.8	-8.1	-8.3	-7.8	-7.3	-18.5	-17.9	-18.0	-17.5	-17.1
12H	-8.8	-8.2	-8.4	-7.9	-7.4	-18.5	-18.0	-18.1	-17.6	-17.1
X=4H Y=2H	-8.6	-7.9	-8.2	-7.5	-7.1	-18.3	-17.6	-17.9	-17.2	-16.8
3H	-8.8	-8.2	-8.4	-7.8	-7.4	-18.5	-17.9	-18.1	-17.5	-17.1
4H	-8.9	-8.4	-8.5	-8.0	-7.5	-18.7	-18.1	-18.2	-17.7	-17.3
6H	-9.1	-8.6	-8.6	-8.2	-7.7	-18.8	-18.3	-18.3	-17.9	-17.4
8H	-9.1	-8.7	-8.7	-8.3	-7.8	-18.9	-18.4	-18.4	-18.0	-17.5
12H	-9.2	-8.9	-8.7	-8.4	-7.9	-18.9	-18.6	-18.4	-18.1	-17.6
X=8H Y=4H	-9.1	-8.7	-8.7	-8.3	-7.8	-18.9	-18.4	-18.4	-18.0	-17.5
6H	-9.3	-8.9	-8.8	-8.4	-8.0	-19.0	-18.7	-18.5	-18.2	-17.7
8H	-9.3	-9.1	-8.8	-8.5	-8.0	-19.1	-18.8	-18.5	-18.3	-17.8
12H	-9.4	-9.2	-8.9	-8.7	-8.1	-19.1	-18.9	-18.6	-18.4	-17.8
X=12H Y=4H	-9.2	-8.9	-8.7	-8.4	-7.9	-18.9	-18.6	-18.4	-18.1	-17.6
6H	-9.3	-9.1	-8.8	-8.6	-8.0	-19.1	-18.8	-18.5	-18.3	-17.8
8H	-9.4	-9.2	-8.9	-8.7	-8.1	-19.1	-18.9	-18.6	-18.4	-17.8

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 90.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600L  
Distance: 7.990 m  
Humidity:  
Inspector:

Tel:  
Fax:

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## Zonal Lumen

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	11421.5	10.9	10.9	0.41	0.41
1.0-2.0	11293.4	32.4	43.3	1.22	1.63
2.0-3.0	11038.2	52.8	96.1	1.98	3.61
3.0-4.0	10670.0	71.4	167.6	2.68	6.29
4.0-5.0	10191.9	87.7	255.3	3.29	9.58
5.0-6.0	9607.1	101.0	356.2	3.79	13.37
6.0-7.0	8936.9	110.9	467.2	4.16	17.53
7.0-8.0	8210.8	117.5	584.7	4.41	21.94
8.0-9.0	7449.2	120.7	705.5	4.53	26.47
9.0-10.0	6676.9	120.8	826.3	4.53	31.00
10.0-11.0	5922.8	118.4	944.7	4.44	35.44
11.0-12.0	5214.7	114.0	1058.7	4.28	39.72
12.0-13.0	4565.2	108.4	1167.0	4.07	43.79
13.0-14.0	3982.7	102.0	1269.0	3.83	47.61
14.0-15.0	3481.1	95.6	1364.6	3.59	51.20
15.0-16.0	3057.3	89.6	1454.2	3.36	54.56
16.0-17.0	2706.3	84.3	1538.4	3.16	57.72
17.0-18.0	2420.7	79.8	1618.3	3.00	60.72
18.0-19.0	2189.7	76.2	1694.5	2.86	63.58
19.0-20.0	2005.2	73.4	1767.9	2.75	66.33
20.0-21.0	1855.8	71.3	1839.1	2.67	69.01
21.0-22.0	1732.3	69.6	1908.8	2.61	71.62
22.0-23.0	1627.9	68.3	1977.1	2.56	74.18
23.0-24.0	1538.5	67.3	2044.4	2.52	76.70
24.0-25.0	1461.1	66.4	2110.8	2.49	79.20
25.0-26.0	1391.6	65.7	2176.5	2.47	81.66
26.0-27.0	1325.5	64.9	2241.4	2.43	84.10
27.0-28.0	1255.1	63.6	2304.9	2.38	86.48
28.0-29.0	1171.6	61.3	2366.2	2.30	88.78
29.0-30.0	1065.3	57.5	2423.7	2.16	90.94
30.0-31.0	928.5	51.7	2475.4	1.94	92.88
31.0-32.0	760.9	43.6	2519.0	1.64	94.51
32.0-33.0	574.0	33.8	2552.8	1.27	95.78
33.0-34.0	396.3	24.0	2576.8	0.90	96.68
34.0-35.0	257.1	16.0	2592.8	0.60	97.28
35.0-36.0	165.1	10.5	2603.3	0.39	97.68

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600L

Distance: 7.990 m

Humidity:

Inspector:

Tel:  
Fax:

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## Zonal Lumen (Continue 1)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	114.2	7.4	2610.8	0.28	97.96
37.0-38.0	89.4	6.0	2616.7	0.22	98.18
38.0-39.0	75.8	5.2	2621.9	0.19	98.37
39.0-40.0	67.1	4.7	2626.6	0.18	98.55
40.0-41.0	60.5	4.3	2630.9	0.16	98.71
41.0-42.0	55.0	4.0	2634.9	0.15	98.86
42.0-43.0	49.9	3.7	2638.6	0.14	99.00
43.0-44.0	45.0	3.4	2642.0	0.13	99.13
44.0-45.0	40.7	3.1	2645.1	0.12	99.25
45.0-46.0	36.8	2.9	2648.0	0.11	99.35
46.0-47.0	33.4	2.7	2650.6	0.10	99.45
47.0-48.0	30.3	2.5	2653.1	0.09	99.55
48.0-49.0	26.8	2.2	2655.3	0.08	99.63
49.0-50.0	23.8	2.0	2657.3	0.07	99.70
50.0-51.0	20.7	1.8	2659.0	0.07	99.77
51.0-52.0	17.8	1.5	2660.6	0.06	99.83
52.0-53.0	14.9	1.3	2661.9	0.05	99.87
53.0-54.0	12.1	1.1	2662.9	0.04	99.91
54.0-55.0	9.6	0.9	2663.8	0.03	99.95
55.0-56.0	7.1	0.6	2664.4	0.02	99.97
56.0-57.0	4.9	0.4	2664.9	0.02	99.99
57.0-58.0	2.7	0.2	2665.1	0.01	100.00
58.0-59.0	0.9	0.1	2665.2	0.00	100.00
59.0-60.0	0.1	0.0	2665.2	0.00	100.00
60.0-61.0	0.0	0.0	2665.2	0.00	100.00
61.0-62.0	0.0	0.0	2665.2	0.00	100.00
62.0-63.0	0.0	0.0	2665.2	0.00	100.00
63.0-64.0	0.0	0.0	2665.2	0.00	100.00
64.0-65.0	0.0	0.0	2665.2	0.00	100.00
65.0-66.0	0.0	0.0	2665.2	0.00	100.00
66.0-67.0	0.0	0.0	2665.2	0.00	100.00
67.0-68.0	0.0	0.0	2665.2	0.00	100.00
68.0-69.0	0.0	0.0	2665.2	0.00	100.00
69.0-70.0	0.0	0.0	2665.2	0.00	100.00
70.0-71.0	0.0	0.0	2665.2	0.00	100.00
71.0-72.0	0.0	0.0	2665.2	0.00	100.00

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600L

Distance: 7.990 m

Humidity:

Inspector:

Fax:

## Zonal Lumen (Continue 2)

[illegible]

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600L

Distance: 7.990 m

Humidity:

Inspector:

Tel:  
Fax:

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## Candlepower Table

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G0.0	11489.2	11413.1	11489.2	11413.1	11489.2					
G1.0	11515.2	11255.6	11329.4	11467.0	11515.2					
G2.0	11415.7	10949.3	11044.5	11370.7	11415.7					
G3.0	11177.4	10528.1	10663.4	11156.4	11177.4					
G4.0	10846.2	10012.5	10169.2	10806.6	10846.2					
G5.0	10367.5	9412.3	9543.3	10377.8	10367.5					
G6.0	9802.7	8718.0	8815.6	9819.9	9802.7					
G7.0	9134.6	7973.5	8050.1	9180.7	9134.6					
G8.0	8393.7	7223.1	7242.6	8488.4	8393.7					
G9.0	7598.4	6469.8	6457.1	7720.3	7598.4					
G10.0	6791.4	5704.3	5688.5	6985.2	6791.4					
G11.0	6025.0	5026.9	4965.5	6195.4	6025.0					
G12.0	5288.4	4399.8	4335.8	5480.5	5288.4					
G13.0	4605.0	3847.4	3777.7	4787.1	4605.0					
G14.0	4002.0	3370.2	3287.9	4184.3	4002.0					
G15.0	3491.6	2978.4	2883.9	3650.6	3491.6					
G16.0	3065.5	2628.8	2557.2	3202.2	3065.5					
G17.0	2711.4	2361.8	2303.8	2819.9	2711.4					
G18.0	2431.7	2140.8	2092.2	2504.0	2431.7					
G19.0	2209.3	1959.3	1935.2	2245.1	2209.3					
G20.0	2035.4	1817.0	1798.2	2042.5	2035.4					
G21.0	1884.3	1697.5	1687.2	1884.3	1884.3					
G22.0	1761.7	1603.5	1586.5	1753.6	1761.7					
G23.0	1656.4	1521.4	1500.6	1639.3	1656.4					
G24.0	1567.9	1449.6	1429.3	1543.6	1567.9					
G25.0	1491.6	1381.6	1362.5	1462.7	1491.6					
G26.0	1422.6	1317.9	1299.3	1394.9	1422.6					
G27.0	1363.2	1245.1	1231.0	1330.0	1363.2					
G28.0	1305.2	1163.5	1142.2	1260.8	1305.2					
G29.0	1238.6	1061.1	1019.1	1182.3	1238.6					
G30.0	1160.1	921.8	852.3	1086.7	1160.1					
G31.0	1053.7	740.7	648.3	964.7	1053.7					
G32.0	897.4	536.4	444.8	801.5	897.4					
G33.0	692.0	343.8	268.9	607.0	692.0					
G34.0	468.4	214.3	162.7	413.0	468.4					
G35.0	290.6	138.9	109.3	259.9	290.6					
G36.0	176.1	102.4	85.9	157.5	176.1					

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600L

Distance: 7.990 m

Humidity:

Inspector:

Tel:  
Fax:

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## Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G37.0	124.1	86.1	72.1	109.3	124.1					
G38.0	96.9	74.9	64.4	87.1	96.9					
G39.0	83.8	68.0	57.0	74.7	83.8					
G40.0	75.2	61.8	51.1	65.6	75.2					
G41.0	68.7	56.1	46.3	59.4	68.7					
G42.0	62.8	51.1	42.5	53.5	62.8					
G43.0	56.3	46.3	37.2	49.4	56.3					
G44.0	51.1	41.3	33.6	44.6	51.1					
G45.0	47.7	37.2	29.8	40.3	47.7					
G46.0	43.0	34.6	26.5	35.3	43.0					
G47.0	39.8	31.3	24.1	32.9	39.8					
G48.0	36.0	28.2	21.0	29.1	36.0					
G49.0	32.2	23.9	17.9	26.5	32.2					
G50.0	29.8	21.5	15.3	23.1	29.8					
G51.0	26.3	18.6	11.2	19.8	26.3					
G52.0	22.7	16.0	10.0	17.9	22.7					
G53.0	19.6	11.7	7.4	14.3	19.6					
G54.0	16.5	10.3	5.7	11.7	16.5					
G55.0	13.8	7.2	2.4	9.3	13.8					
G56.0	11.2	5.3	0.5	7.4	11.2					
G57.0	8.1	1.9	0.0	4.5	8.1					
G58.0	4.3	0.0	0.0	2.6	4.3					
G59.0	0.5	0.0	0.0	0.0	0.5					
G60.0	0.0	0.0	0.0	0.0	0.0					
G61.0	0.0	0.0	0.0	0.0	0.0					
G62.0	0.0	0.0	0.0	0.0	0.0					
G63.0	0.0	0.0	0.0	0.0	0.0					
G64.0	0.0	0.0	0.0	0.0	0.0					
G65.0	0.0	0.0	0.0	0.0	0.0					
G66.0	0.0	0.0	0.0	0.0	0.0					
G67.0	0.0	0.0	0.0	0.0	0.0					
G68.0	0.0	0.0	0.0	0.0	0.0					
G69.0	0.0	0.0	0.0	0.0	0.0					
G70.0	0.0	0.0	0.0	0.0	0.0					
G71.0	0.0	0.0	0.0	0.0	0.0					
G72.0	0.0	0.0	0.0	0.0	0.0					
G73.0	0.0	0.0	0.0	0.0	0.0					

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600L

Distance: 7.990 m

Humidity:

Inspector:

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## Unit: cd

C Plane (°):0.0-360.0: 90.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600L  
Distance: 7.990 m  
Humidity:  
Inspector: