

Report No.:

Test Time: 2025-08-24 18:37

## Luminaire Property

Luminaire Manufacturer:

Lamp Catalog: V13C F90 930

Luminous Width (mm): -108

Current: 0.175 A

Power Factor: 0.972

Luminous Length (mm): -108

Voltage: 241.6 V

Power: 41.20 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 4769.1 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H60.8

Vertical Diffuse Angle(50%): V60.8

Luminaire Efficacy Rating (LER): 115.81

Max. Intensity: 5290.01 cd

S/MH(C0/C180): 1.00

Total Rated Lamp Lumens: 4769.1 lm

Efficiency: 100%

Upward Ratio: 0%

Central Intensity: 5200.14 cd

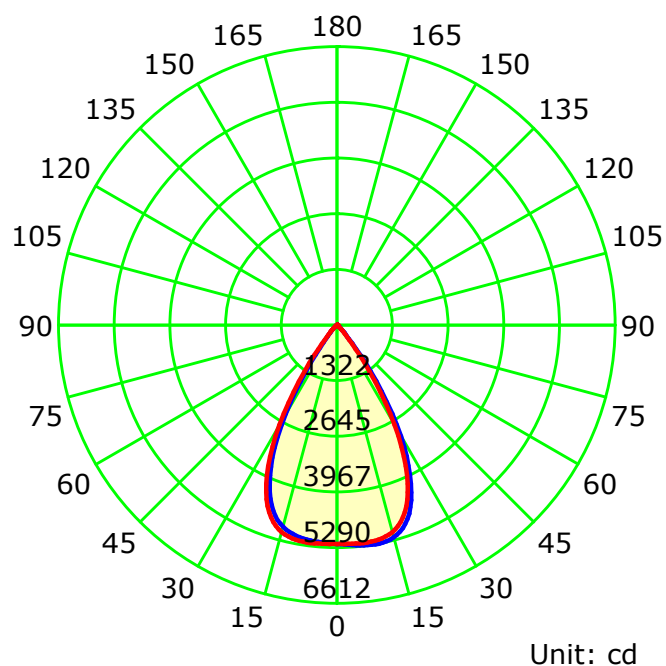
Pos of Max. Intensity: H0 V10

S/MH(C90/C270): 1.00

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-180.0: 180.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

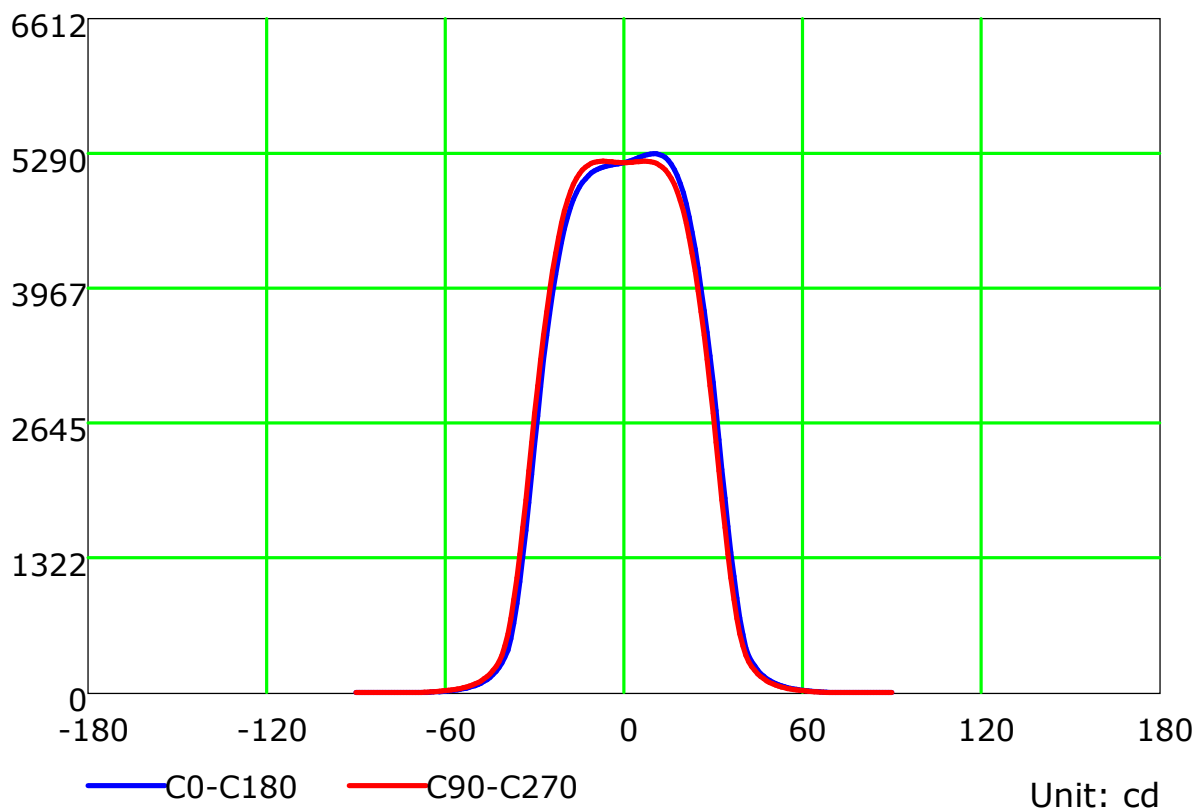
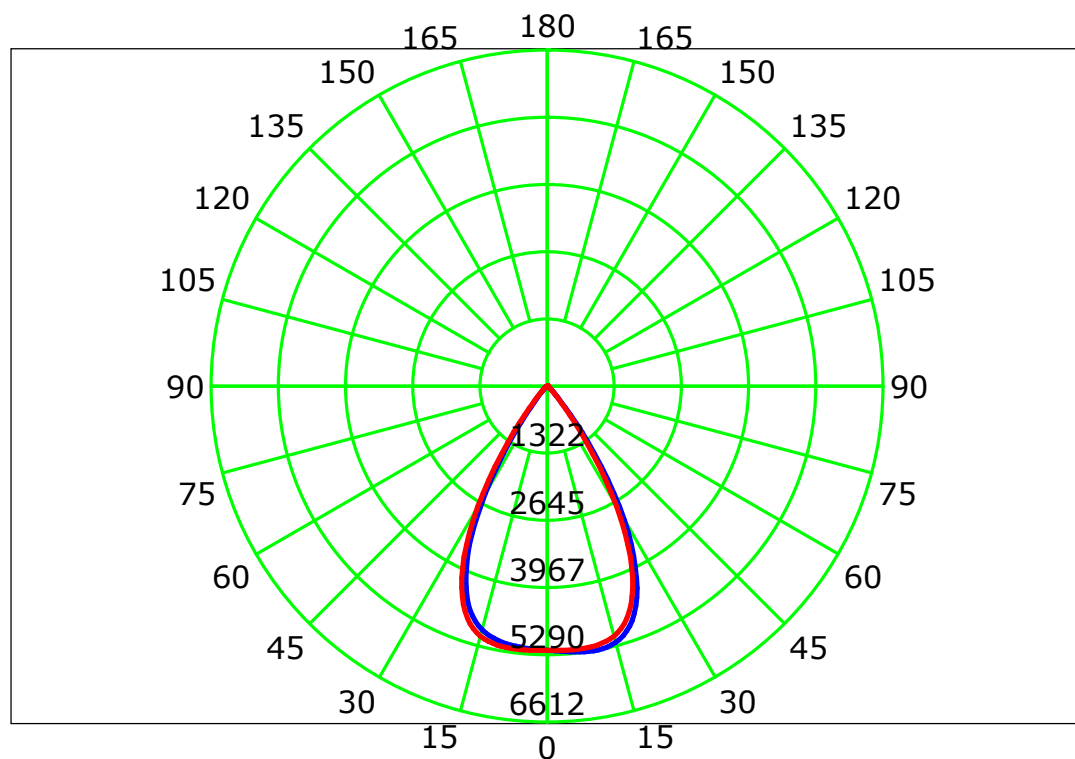
Test Device: CHL-6E

Distance: 2.905 m

Humidity:

Inspector:

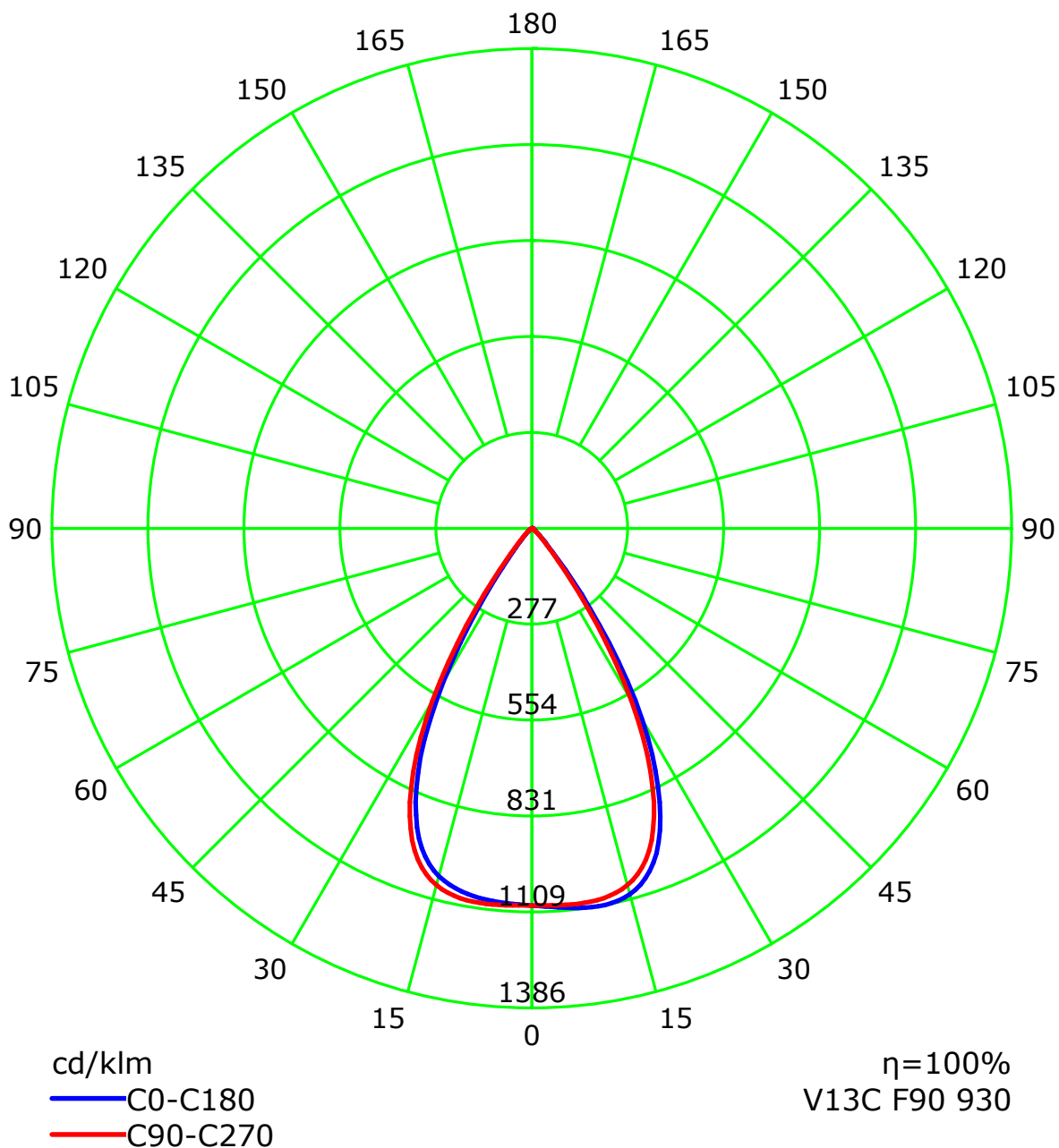
## Luminous Intensity Distribution Curve



C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

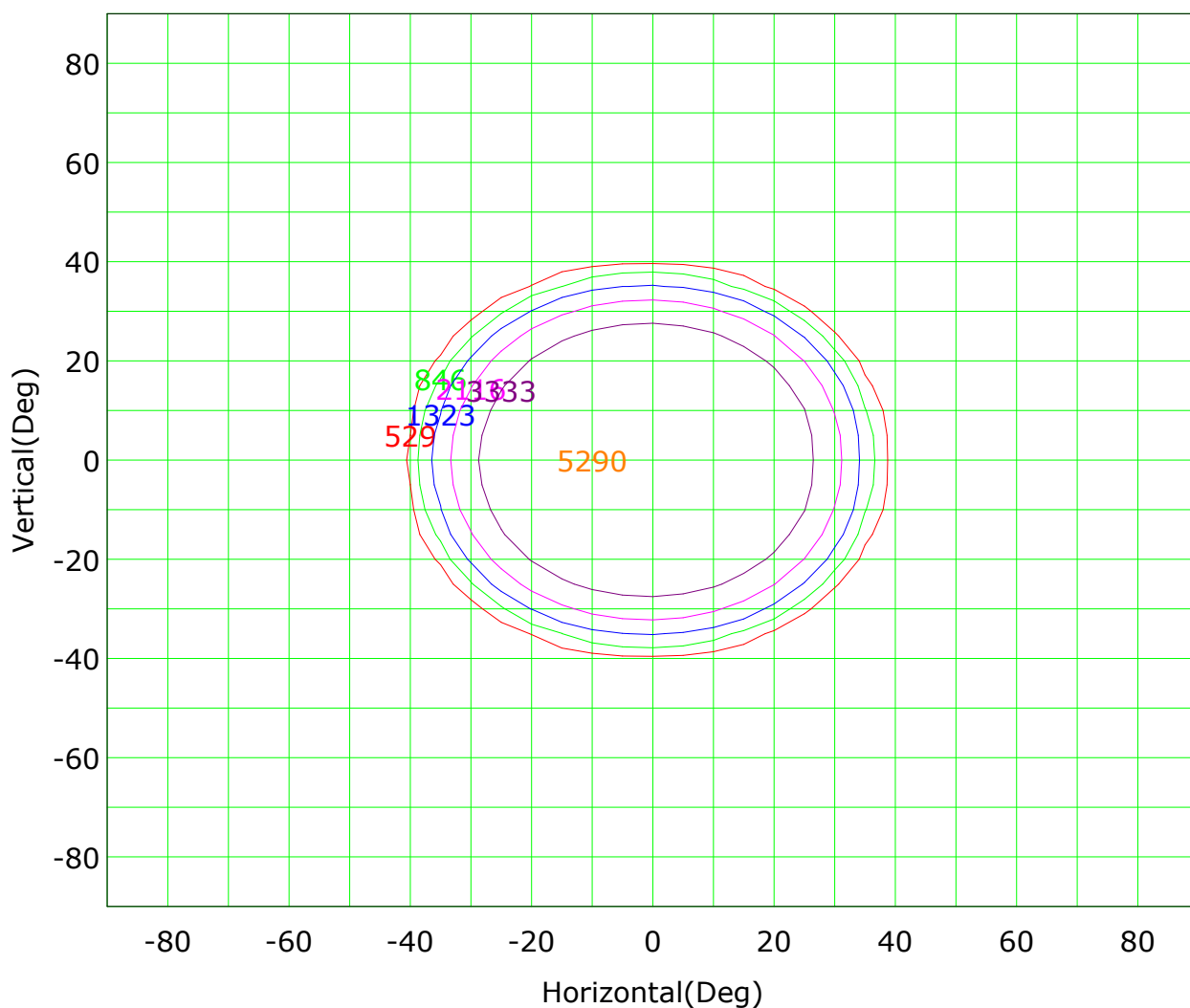
## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

## Isocandela (rectangle)



Imax (100%): 5290 cd

( 10%): 529 cd	( 16%): 846 cd
( 25%): 1323 cd	( 40%): 2116 cd
( 63%): 3333 cd	(100%): 5290 cd

C Plane (°):0.0-180.0: 180.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

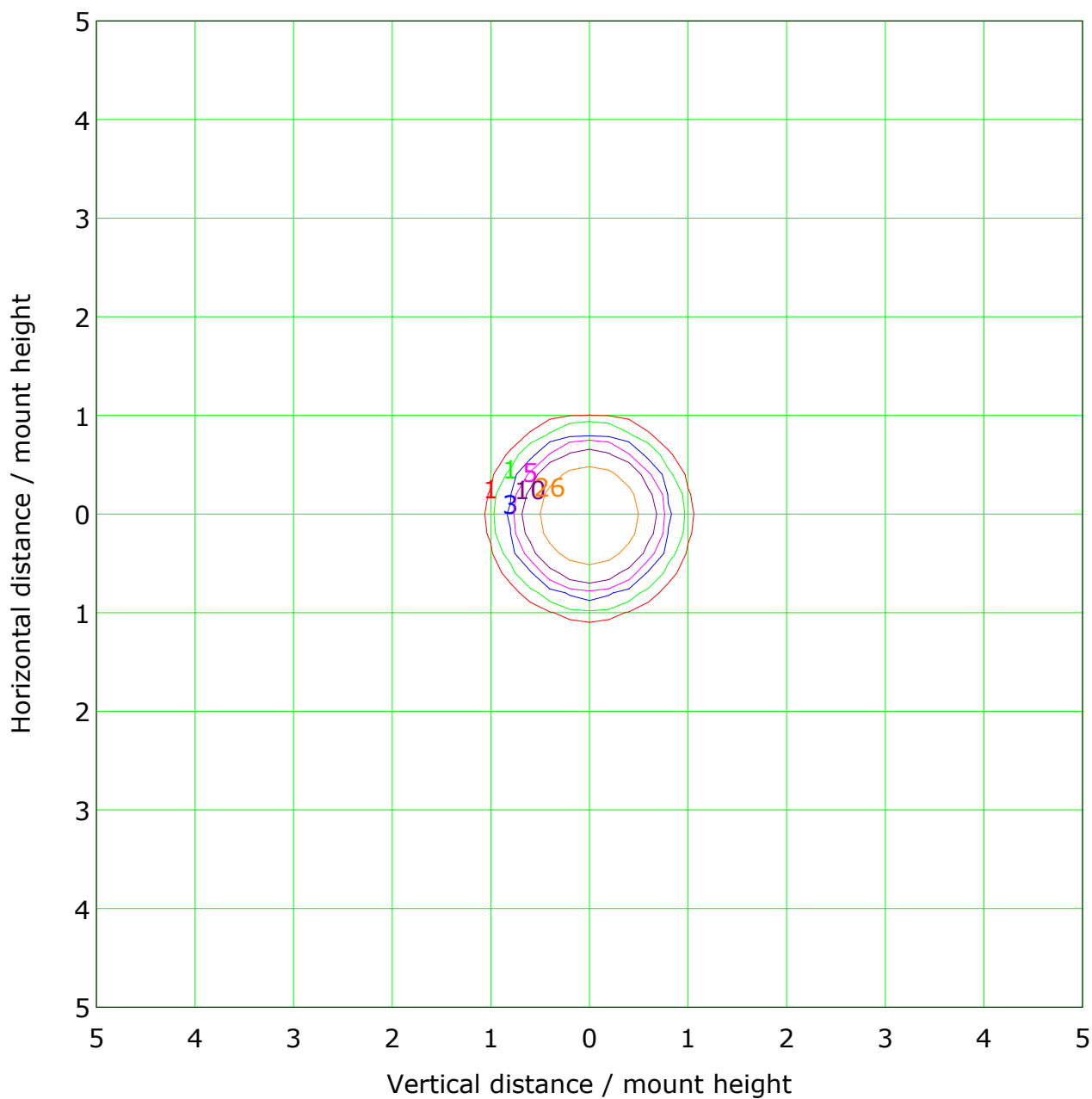
Test Device: CHL-6E

Distance: 2.905 m

Humidity:

Inspector:

## IsoLux Plot



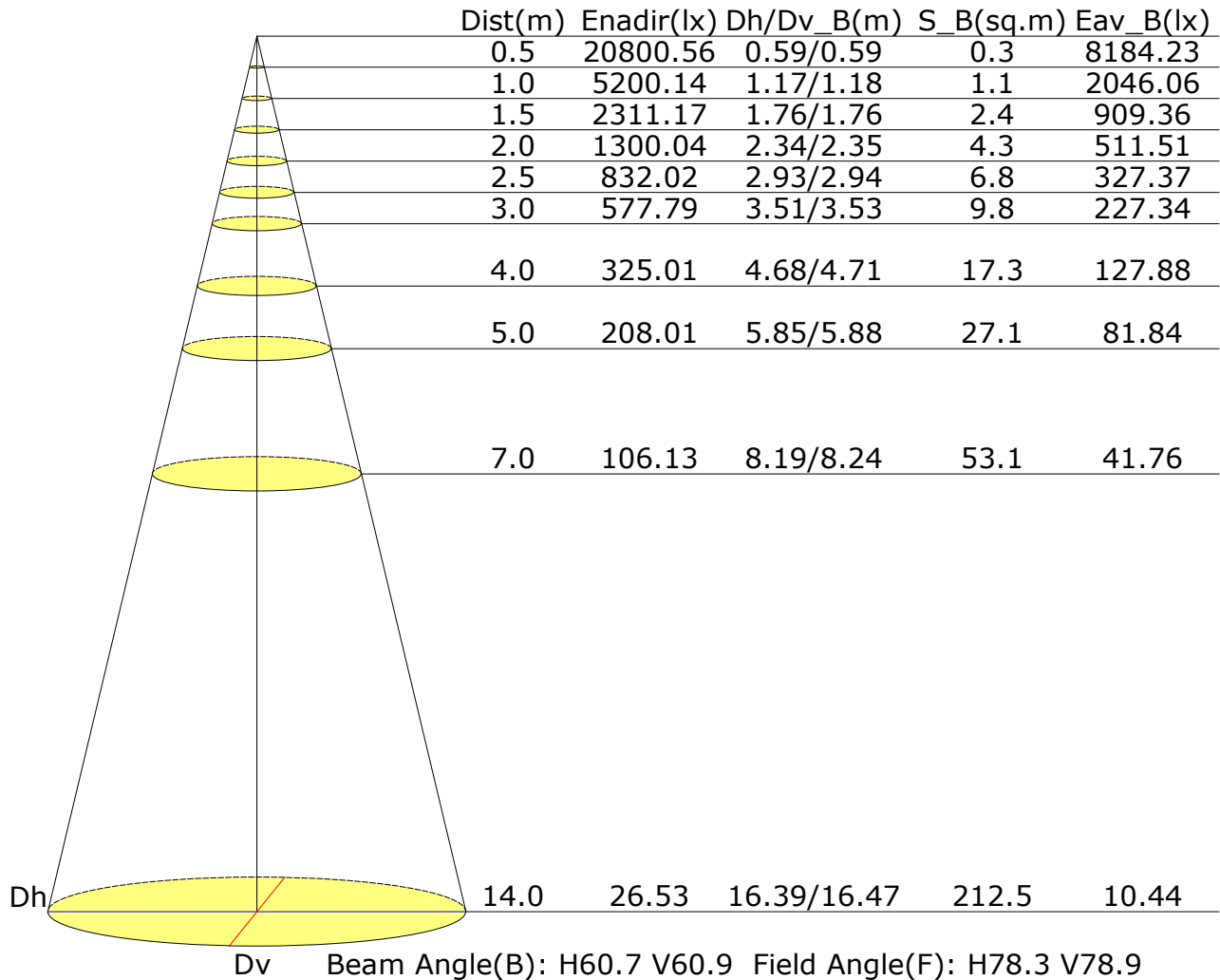
Mounting Height: 10.0m    Max Lux(100%): 52.1 lx

( 1%): 0.5 lx	( 2%): 1.0 lx
( 5%): 2.6 lx	( 10%): 5.2 lx
( 20%): 10.4 lx	( 50%): 26.0 lx
(100%): 52.1 lx	

C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

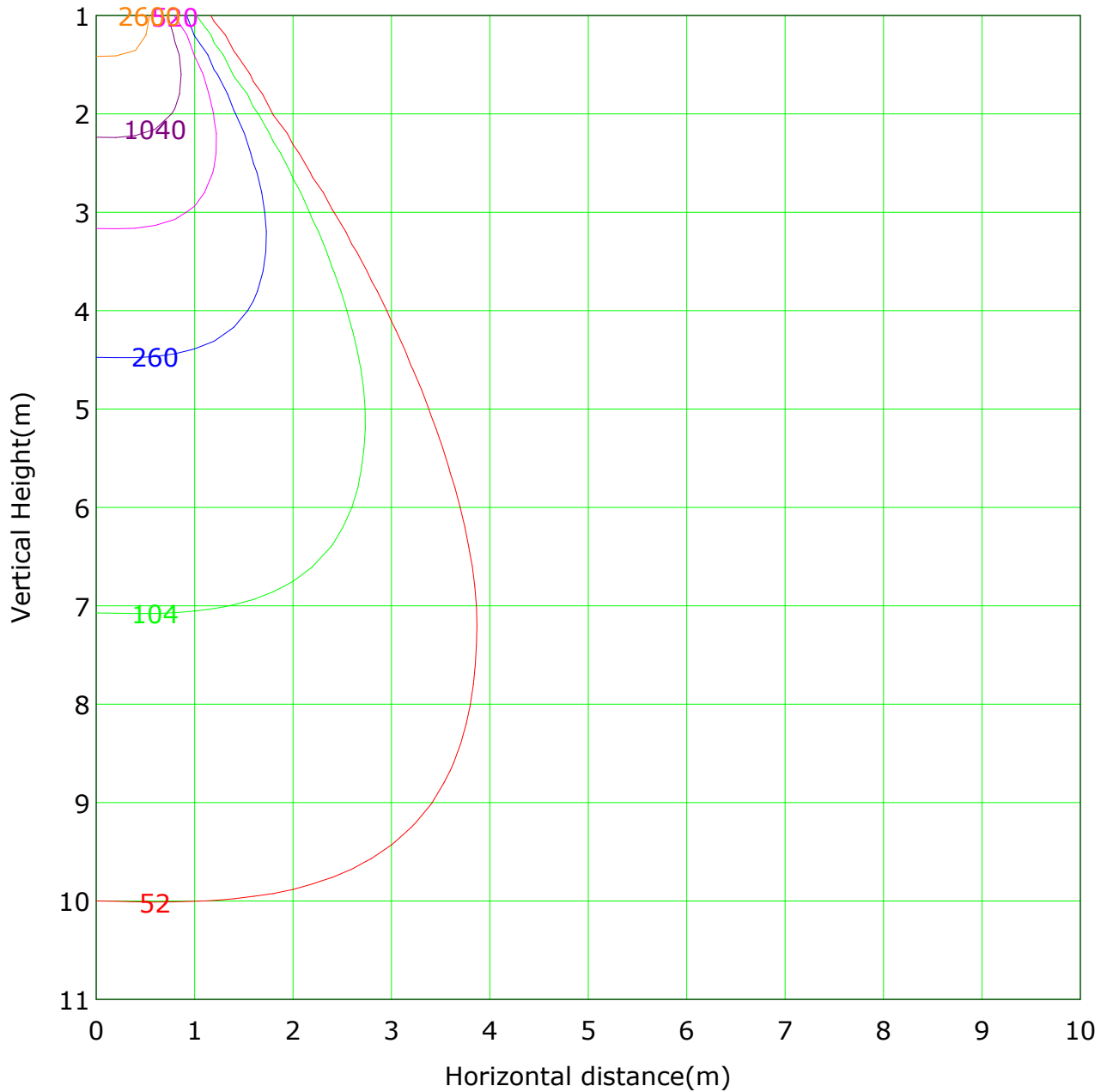
## Illuminance at a Distance



C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

## Vertical IsoLux Plot



Lowest(m): 1.0m   Highest(m): 11.0m   Max Lux: 5200.1 lx  
— ( 1%): 52.0 lx   — ( 2%): 104.0 lx  
— ( 5%): 260.0 lx   — ( 10%): 520.0 lx  
— ( 20%): 1040.0 lx   — ( 50%): 2600.1 lx  
— (100%): 5200.1 lx

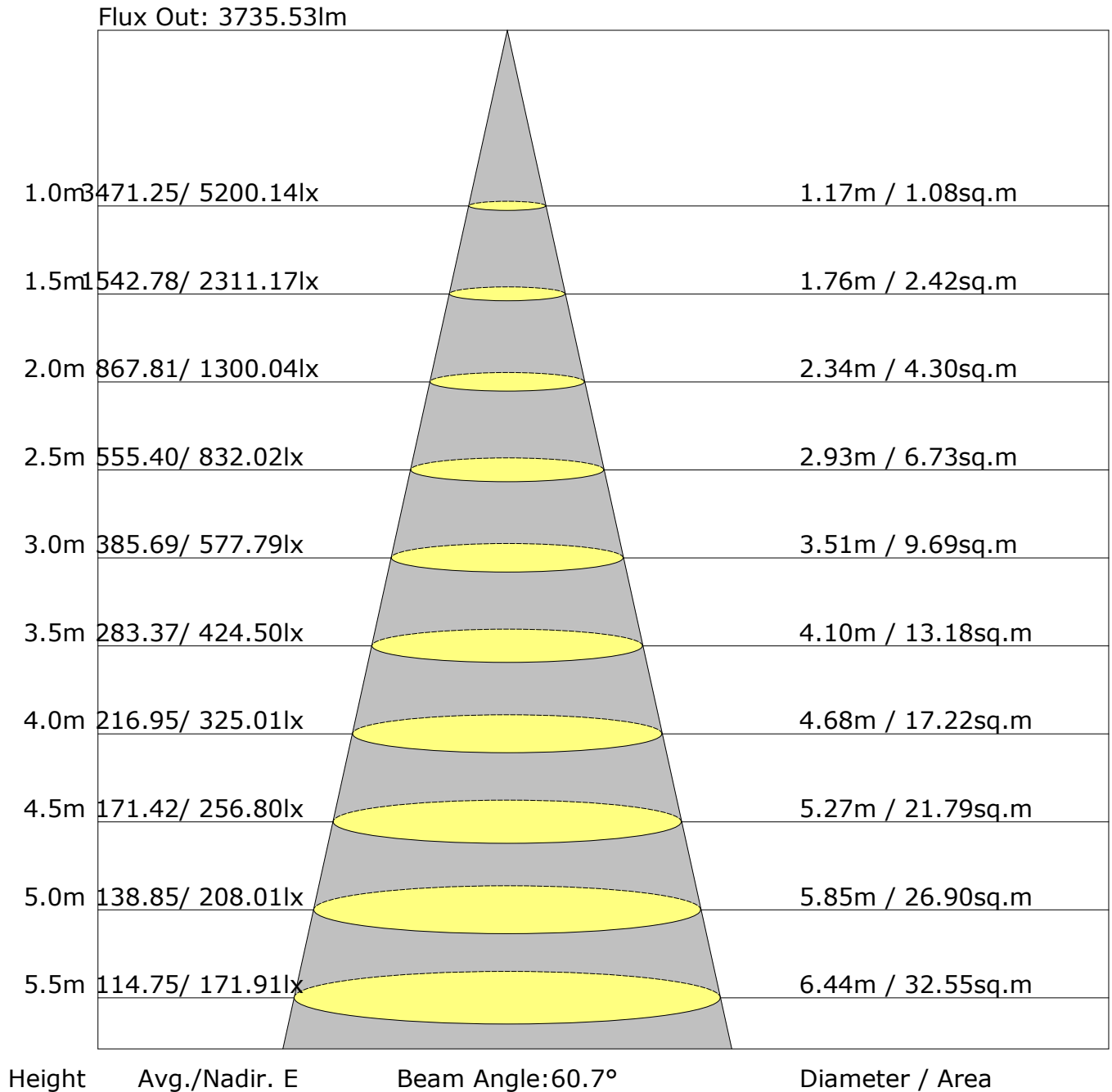
C Plane (°): 0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°): 0.0-90.0: 1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:



## The Average Illuminance Effective Figure



C Plane (°): 0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°): 0.0-90.0: 1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
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	21.8	22.7	22.1	22.9	23.1	21.2	22.0	21.4	22.2	22.4
3H	21.7	22.4	22.0	22.7	22.9	21.0	21.8	21.3	22.0	22.3
4H	21.6	22.3	21.9	22.6	22.8	21.0	21.7	21.3	21.9	22.2
6H	21.5	22.2	21.9	22.5	22.8	20.9	21.5	21.2	21.8	22.1
8H	21.5	22.1	21.8	22.4	22.7	20.8	21.5	21.2	21.8	22.1
12H	21.5	22.1	21.8	22.4	22.7	20.8	21.4	21.2	21.7	22.0
X=4H Y=2H	21.6	22.3	21.9	22.6	22.9	21.0	21.7	21.3	21.9	22.2
3H	21.5	22.1	21.8	22.4	22.7	20.8	21.4	21.2	21.7	22.0
4H	21.4	21.9	21.8	22.3	22.6	20.7	21.3	21.1	21.6	22.0
6H	21.3	21.8	21.7	22.1	22.5	20.7	21.1	21.1	21.5	21.9
8H	21.3	21.7	21.7	22.1	22.5	20.6	21.0	21.0	21.4	21.8
12H	21.2	21.6	21.7	22.0	22.4	20.6	21.0	21.0	21.4	21.8
X=8H Y=4H	21.3	21.7	21.7	22.1	22.5	20.6	21.0	21.0	21.4	21.8
6H	21.2	21.5	21.6	21.9	22.4	20.5	20.9	21.0	21.3	21.7
8H	21.1	21.4	21.6	21.9	22.4	20.5	20.8	21.0	21.2	21.7
12H	21.1	21.3	21.6	21.8	22.3	20.4	20.7	20.9	21.2	21.7
X=12H Y=4H	21.2	21.6	21.7	22.0	22.4	20.6	21.0	21.0	21.4	21.8
6H	21.1	21.4	21.6	21.9	22.4	20.5	20.8	21.0	21.2	21.7
8H	21.1	21.3	21.6	21.8	22.3	20.4	20.7	20.9	21.2	21.7
Variations with the observer position at spacings:										
S=1.0H	+5.7/-12.2					+5.7/-12.4				
S=1.5H	+8.5/-17.1					+8.4/-17.9				
S=2.0H	+10.5/-26.4					+10.4/-28.2				

Calculate in accordance with CIE Pub.117. The table is revised with  $4769\text{lm}$  ( $8\log(F/F_0) = 5.4$ ).

C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

**FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM**

	ZONE	LUMENS	% LAMP LUMENS
	FORWARD LIGHT	2472	51.8
	FL ( 0°-30°)	1881	39.4
	FM (30°-60°)	587	12.3
	FH (60°-80°)	4	0.1
	FVH (80°-90°)	0	0.0
	BACK LIGHT	2297	48.2
	BL ( 0°-30°)	1805	37.8
	BM (30°-60°)	489	10.3
	BH (60°-80°)	3	0.1
	BVH (80°-90°)	0	0.0
	UP LIGHT	0	0.0
	UL (90°-100°)	0	0.0
	UH (100°-180°)	0	0.0
	TRAPPED LIGHT	NA	NA

BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B3 U0 G0
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B3 U0 G0

C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

## 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	5199.8	5.0	5.0	0.10	0.10
1.0-2.0	5200.8	14.9	19.9	0.31	0.42
2.0-3.0	5203.3	24.9	44.8	0.52	0.94
3.0-4.0	5206.5	34.9	79.6	0.73	1.67
4.0-5.0	5209.6	44.8	124.5	0.94	2.61
5.0-6.0	5212.1	54.8	179.3	1.15	3.76
6.0-7.0	5214.2	64.7	244.0	1.36	5.12
7.0-8.0	5214.2	74.6	318.6	1.56	6.68
8.0-9.0	5211.4	84.5	403.1	1.77	8.45
9.0-10.0	5206.5	94.2	497.3	1.98	10.43
10.0-11.0	5199.1	103.9	601.2	2.18	12.61
11.0-12.0	5185.4	113.4	714.6	2.38	14.98
12.0-13.0	5165.7	122.6	837.2	2.57	17.55
13.0-14.0	5141.5	131.6	968.8	2.76	20.31
14.0-15.0	5109.9	140.3	1109.1	2.94	23.26
15.0-16.0	5068.8	148.5	1257.7	3.11	26.37
16.0-17.0	5016.2	156.2	1413.9	3.28	29.65
17.0-18.0	4951.2	163.3	1577.2	3.42	33.07
18.0-19.0	4872.9	169.6	1746.7	3.56	36.63
19.0-20.0	4778.8	174.9	1921.7	3.67	40.29
20.0-21.0	4667.2	179.2	2100.9	3.76	44.05
21.0-22.0	4536.3	182.3	2283.2	3.82	47.88
22.0-23.0	4388.4	184.2	2467.4	3.86	51.74
23.0-24.0	4223.1	184.7	2652.0	3.87	55.61
24.0-25.0	4038.4	183.6	2835.7	3.85	59.46
25.0-26.0	3839.0	181.2	3016.9	3.80	63.26
26.0-27.0	3622.0	177.2	3194.2	3.72	66.98
27.0-28.0	3387.9	171.5	3365.7	3.60	70.57
28.0-29.0	3139.0	164.2	3530.0	3.44	74.02
29.0-30.0	2875.0	155.2	3685.2	3.26	77.27
30.0-31.0	2598.0	144.6	3829.8	3.03	80.30
31.0-32.0	2315.0	132.6	3962.4	2.78	83.09
32.0-33.0	2032.0	119.7	4082.2	2.51	85.60
33.0-34.0	1754.3	106.2	4188.3	2.23	87.82
34.0-35.0	1489.3	92.5	4280.9	1.94	89.76
35.0-36.0	1243.2	79.2	4360.0	1.66	91.42

C Plane (°):0.0-180.0: 180.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

## 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	1018.8	66.5	4426.5	1.39	92.82
37.0-38.0	819.4	54.7	4481.2	1.15	93.96
38.0-39.0	651.2	44.5	4525.6	0.93	94.89
39.0-40.0	516.8	36.0	4561.7	0.76	95.65
40.0-41.0	412.2	29.4	4591.0	0.62	96.27
41.0-42.0	334.6	24.3	4615.3	0.51	96.78
42.0-43.0	279.8	20.7	4636.1	0.43	97.21
43.0-44.0	238.0	18.0	4654.0	0.38	97.59
44.0-45.0	202.2	15.5	4669.6	0.33	97.91
45.0-46.0	171.3	13.4	4683.0	0.28	98.19
46.0-47.0	147.1	11.7	4694.7	0.25	98.44
47.0-48.0	126.0	10.2	4704.9	0.21	98.65
48.0-49.0	108.1	8.9	4713.8	0.19	98.84
49.0-50.0	92.7	7.7	4721.5	0.16	99.00
50.0-51.0	80.0	6.8	4728.3	0.14	99.14
51.0-52.0	70.2	6.0	4734.3	0.13	99.27
52.0-53.0	60.4	5.3	4739.5	0.11	99.38
53.0-54.0	52.0	4.6	4744.1	0.10	99.48
54.0-55.0	44.6	4.0	4748.1	0.08	99.56
55.0-56.0	38.3	3.5	4751.6	0.07	99.63
56.0-57.0	33.0	3.0	4754.6	0.06	99.70
57.0-58.0	28.4	2.6	4757.2	0.06	99.75
58.0-59.0	24.6	2.3	4759.5	0.05	99.80
59.0-60.0	20.7	2.0	4761.5	0.04	99.84
60.0-61.0	17.6	1.7	4763.1	0.04	99.87
61.0-62.0	14.4	1.4	4764.5	0.03	99.90
62.0-63.0	12.3	1.2	4765.7	0.03	99.93
63.0-64.0	10.5	1.0	4766.8	0.02	99.95
64.0-65.0	8.1	0.8	4767.6	0.02	99.97
65.0-66.0	5.6	0.6	4768.1	0.01	99.98
66.0-67.0	3.9	0.4	4768.5	0.01	99.99
67.0-68.0	2.8	0.3	4768.8	0.01	99.99
68.0-69.0	1.4	0.1	4768.9	0.00	100.00
69.0-70.0	1.1	0.1	4769.0	0.00	100.00
70.0-71.0	0.7	0.1	4769.1	0.00	100.00
71.0-72.0	0.0	0.0	4769.1	0.00	100.00

C Plane (°):0.0-180.0: 180.0  
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Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: CHL-6E  
Distance: 2.905 m  
Humidity:  
Inspector:

## Candlepower Table

Unit: cd

G\C	C0.0	C180.0								
G0.0	5200.1	5200.1								
G1.0	5205.8	5193.1								
G2.0	5215.6	5188.9								
G3.0	5225.4	5183.3								
G4.0	5238.0	5179.1								
G5.0	5249.3	5172.0								
G6.0	5260.5	5166.4								
G7.0	5271.8	5158.0								
G8.0	5278.8	5148.2								
G9.0	5284.4	5134.1								
G10.0	5290.0	5117.3								
G11.0	5290.0	5099.0								
G12.0	5280.2	5072.3								
G13.0	5269.0	5041.5								
G14.0	5249.3	5006.3								
G15.0	5221.2	4962.8								
G16.0	5183.3	4908.0								
G17.0	5132.7	4840.6								
G18.0	5070.9	4760.6								
G19.0	4995.1	4665.1								
G20.0	4903.8	4551.4								
G21.0	4795.7	4417.9								
G22.0	4665.1	4266.3								
G23.0	4519.0	4103.4								
G24.0	4353.3	3916.6								
G25.0	4166.6	3717.2								
G26.0	3964.4	3507.9								
G27.0	3748.1	3267.8								
G28.0	3534.6	3001.0								
G29.0	3305.7	2714.5								
G30.0	3045.9	2433.7								
G31.0	2767.9	2144.4								
G32.0	2482.8	1864.9								
G33.0	2190.7	1589.7								
G34.0	1907.0	1329.9								
G35.0	1630.4	1089.7								
G36.0	1376.2	876.3								

C Plane (°):0.0-180.0: 180.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: CHL-6E

Distance: 2.905 m

Humidity:

Inspector:

## Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C180.0								
G37.0	1141.7	681.1								
G38.0	926.8	528.0								
G39.0	734.5	415.7								
G40.0	568.7	348.3								
G41.0	439.5	292.1								
G42.0	359.5	247.2								
G43.0	304.7	207.8								
G44.0	262.6	176.9								
G45.0	220.5	148.9								
G46.0	188.2	127.8								
G47.0	161.5	110.9								
G48.0	137.6	94.1								
G49.0	120.8	80.1								
G50.0	101.1	68.8								
G51.0	89.9	60.4								
G52.0	77.2	53.4								
G53.0	67.4	43.5								
G54.0	57.6	39.3								
G55.0	47.8	33.7								
G56.0	43.5	28.1								
G57.0	36.5	23.9								
G58.0	32.3	21.1								
G59.0	26.7	18.3								
G60.0	22.5	15.4								
G61.0	21.1	11.2								
G62.0	16.9	8.4								
G63.0	14.0	9.8								
G64.0	11.2	7.0								
G65.0	9.8	4.2								
G66.0	7.0	1.4								
G67.0	4.2	2.8								
G68.0	4.2	0.0								
G69.0	1.4	0.0								
G70.0	2.8	0.0								
G71.0	0.0	0.0								
G72.0	0.0	0.0								
G73.0	0.0	0.0								

C Plane (°):0.0-180.0: 180.0  
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Gamma Plane (°):0.0-90.0:1.0  
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Unit: cd

Inspector: