

Report No.: MSL-12

Test Time: 2019-02-22 10:25

Luminaire Property

Luminaire Manufacturer: Stand Iluminaciones S.A.S

Luminaire Category: Interior

Luminaire Description: Bala Stil Led Plastic Case 10W Samsung

Luminous Length (mm): 70 Diametro

Luminous Width (mm): 70 Diametro

Voltage: 120.1 V

Current: 0.088 A

Power: 9.26 W

Power Factor: 0.871

Photometric Results

CIE Class: Direct

Total Rated Lamp Lumens: 787.4 lm

Measurement Flux: 787.4 lm

Efficiency: 100%

Downward Ratio: 100%

Upward Ratio: 0%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 161.4, 161.2, 161.3, 161.4

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 109.2, 109.0, 109.0, 109.1

Luminaire Efficacy Rating (LER): 85.08

Central Intensity: 285.3 cd

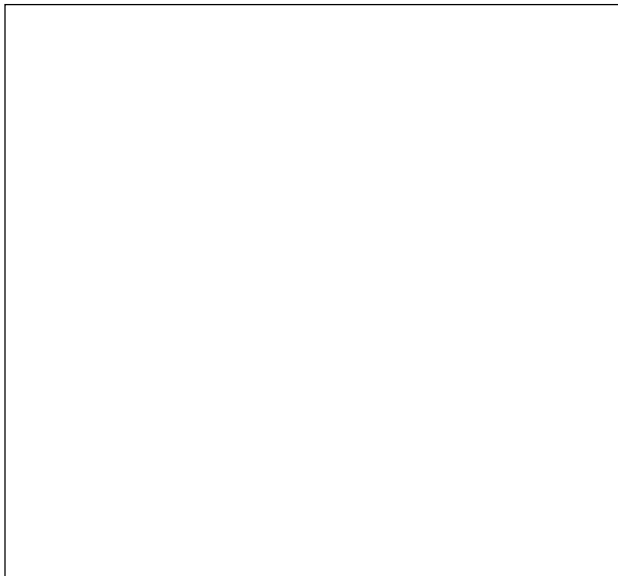
Max. Intensity: 285.52 cd

Pos of Max. Intensity: H10 V1

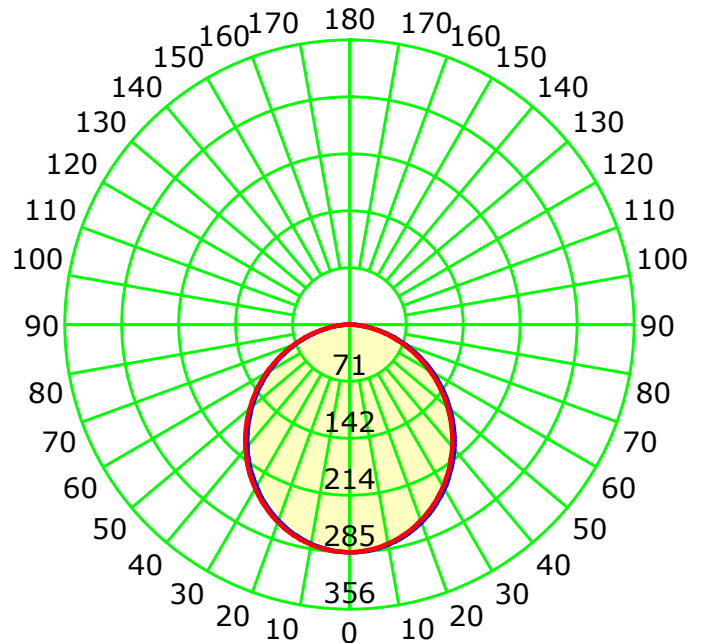
S/MH(C0/C180): 1.23

S/MH(C90/C270): 1.23

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 109.1°

C Plane (°):0.0-360.0: 10.0

Gamma Plane (°):0.0-90.0:1.0

Test Lab: LABORATORIO STAND

Test Device: LSG-1700B C90-C270

Test Type: TYPE C

Distance: 11.772 m

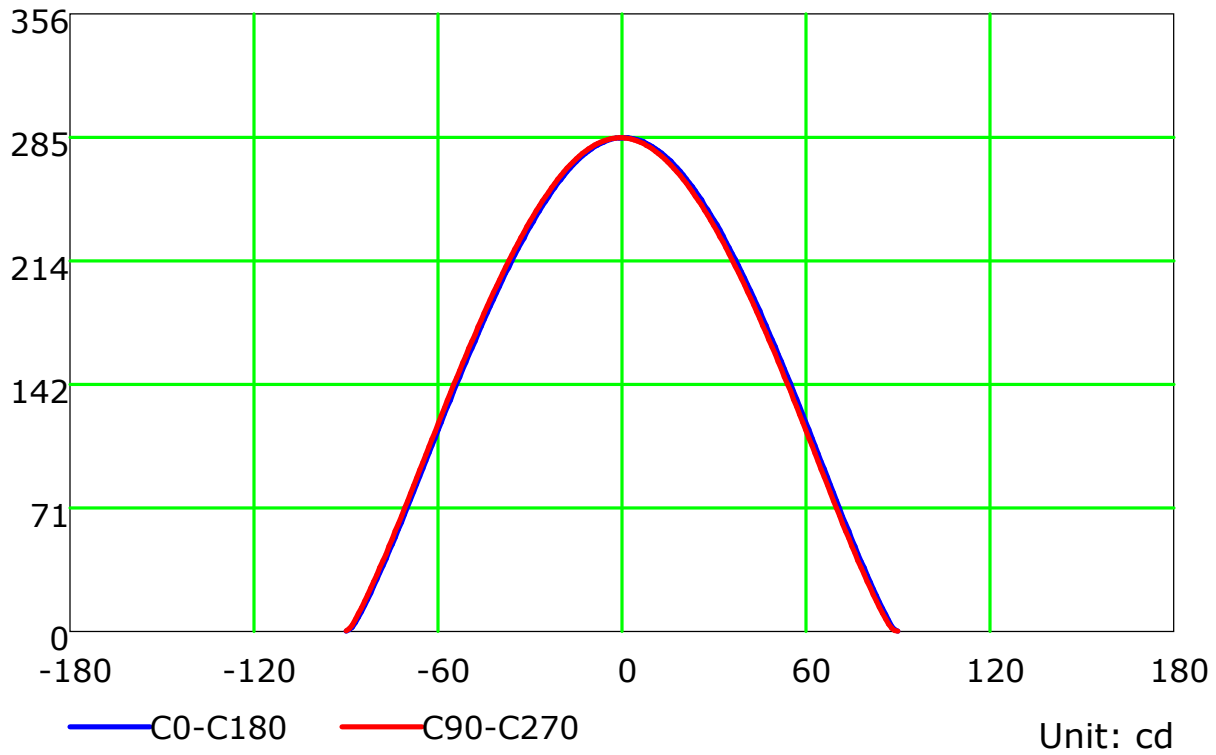
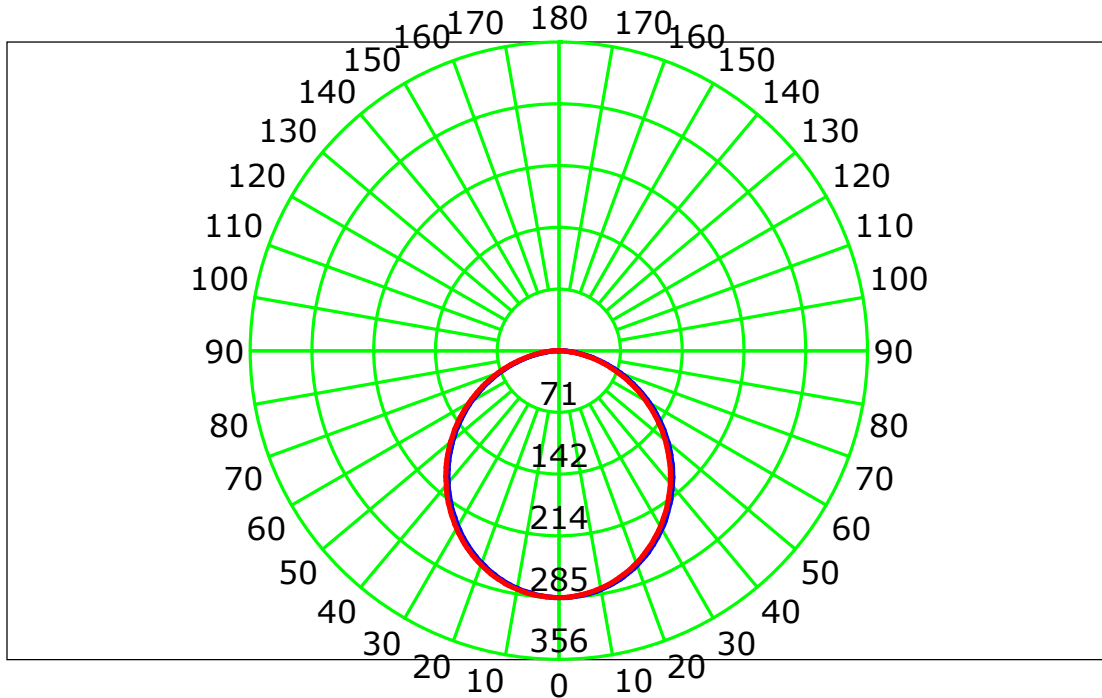
Temperature: 24.7

Humidity:

Operator: Cristian Herrera Arismendy

Inspector:

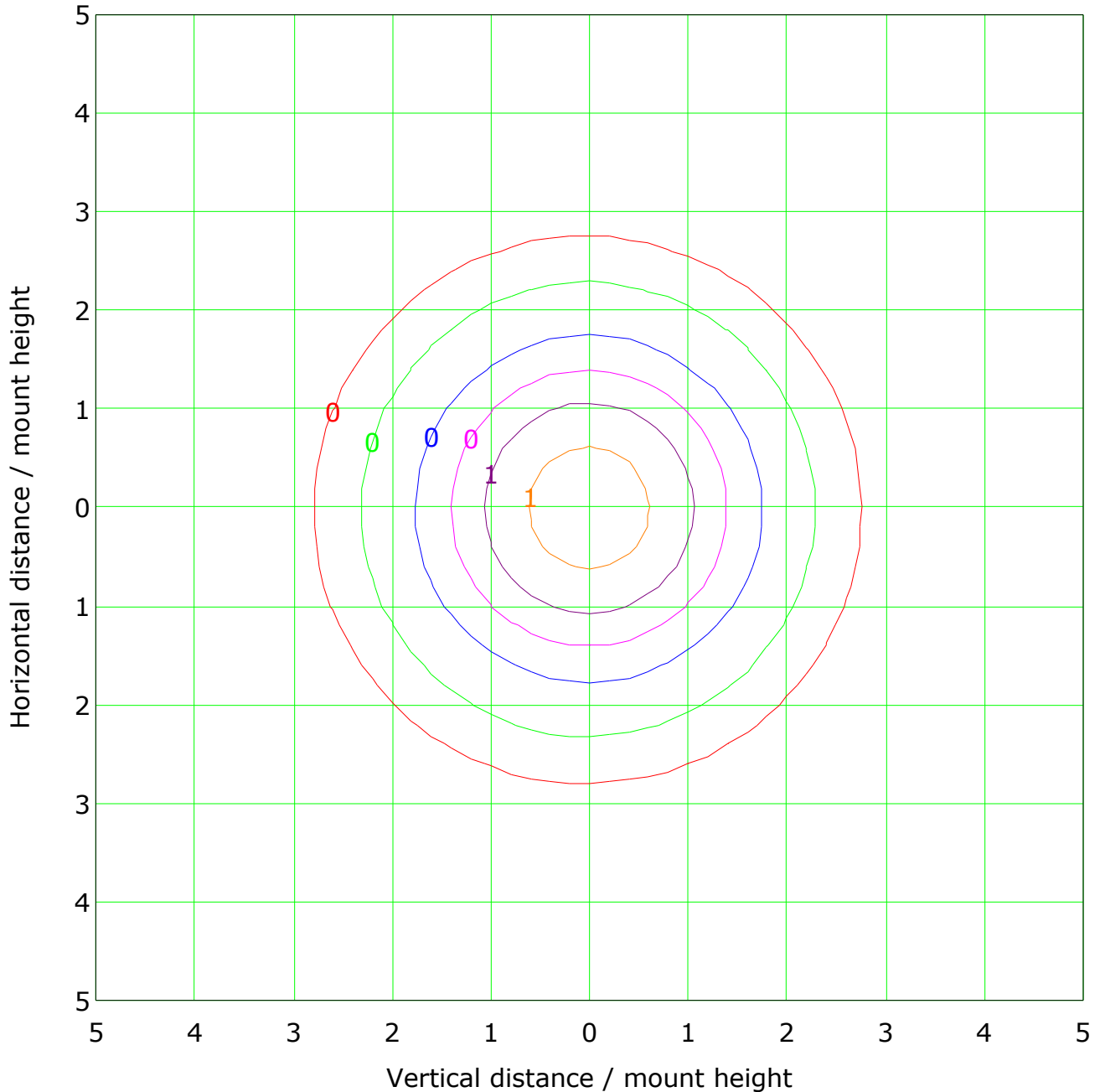
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0
 Test Lab: LABORATORIO STAND
 Test Type: TYPE C
 Temperature: 24.7
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-90.0:1.0
 Test Device: LSG-1700B
 Distance: 11.772 m
 Humidity:
 Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 2.9 lx

— (1%): 0.0 lx

— (2%): 0.1 lx

— (5%): 0.1 lx

— (10%): 0.2 lx

C Plane (°):0.0-360.0: 10.0, 0.6 lx

Gamma Plane (°):0.0-90.0:1.0

Test Lab: LABORATORIO STAND 0.6 lx

Test Device: LSG-1700B lx

Test Type: TYPE C (100%): 2.9 lx

Distance: 11.772 m

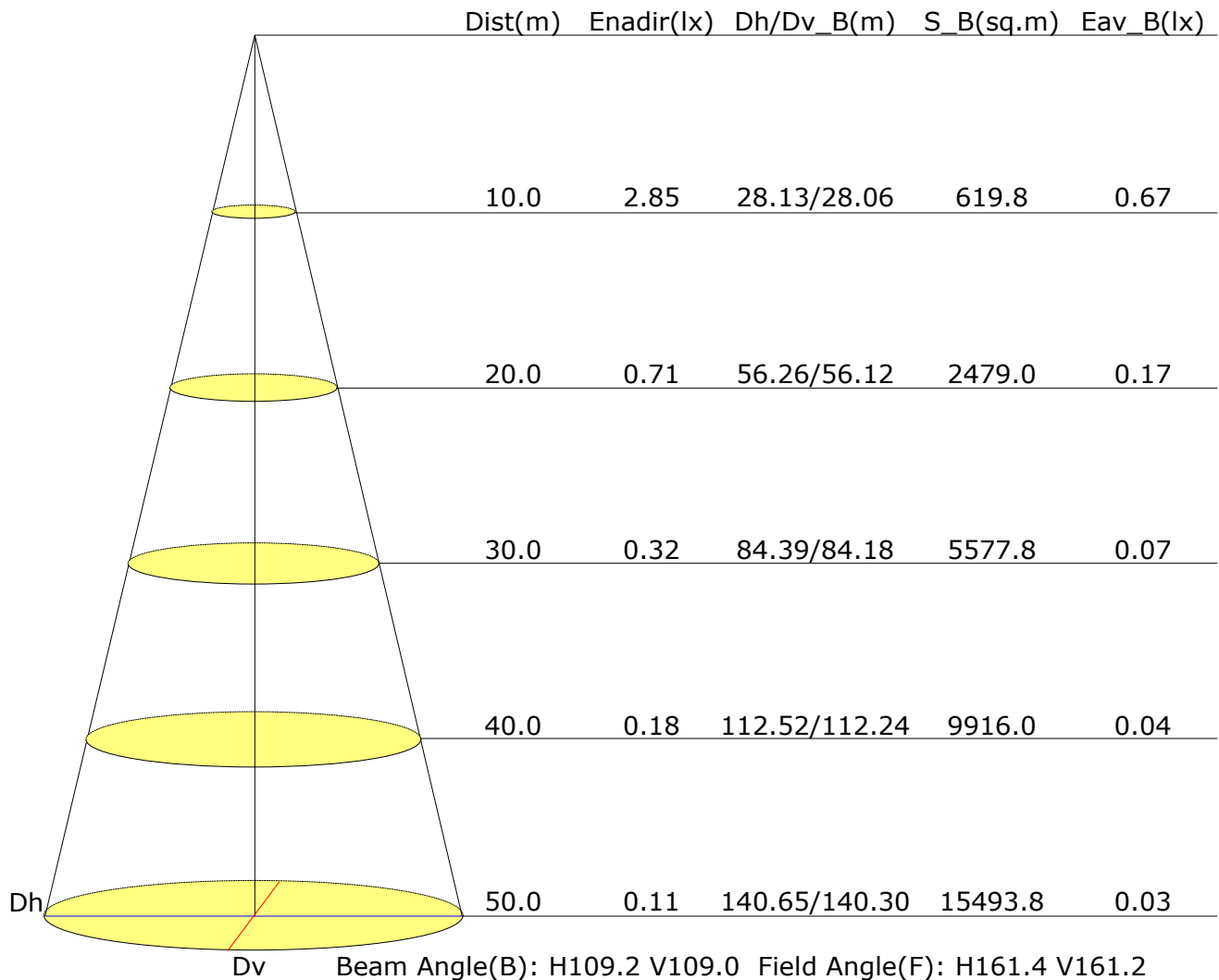
Temperature: 24.7

Humidity:

Operator: Cristian Herrera Arismendy

Inspector:

Illuminance at a Distance



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	26.3	27.7	26.6	27.9	28.2	26.2	27.6	26.5	27.8	28.1
3H	27.9	29.2	28.2	29.4	29.7	27.8	29.0	28.1	29.3	29.6
4H	28.5	29.7	28.9	30.0	30.3	28.4	29.6	28.7	29.9	30.2
6H	29.0	30.1	29.4	30.4	30.8	28.8	29.9	29.2	30.3	30.6
8H	29.2	30.3	29.6	30.6	30.9	29.0	30.1	29.4	30.4	30.7
12H	29.3	30.3	29.7	30.6	31.0	29.1	30.1	29.4	30.4	30.8
X=4H Y=2H	27.0	28.2	27.3	28.5	28.8	26.9	28.1	27.3	28.4	28.7
3H	28.8	29.8	29.1	30.1	30.5	28.7	29.7	29.0	30.0	30.4
4H	29.5	30.5	29.9	30.8	31.2	29.4	30.3	29.8	30.7	31.1
6H	30.2	31.0	30.6	31.4	31.8	30.0	30.8	30.4	31.2	31.6
8H	30.4	31.1	30.8	31.5	32.0	30.2	30.9	30.6	31.3	31.8
12H	30.5	31.2	31.0	31.6	32.1	30.3	31.0	30.8	31.4	31.8
X=8H Y=4H	29.8	30.6	30.3	31.0	31.4	29.7	30.5	30.2	30.9	31.3
6H	30.6	31.2	31.1	31.7	32.1	30.5	31.1	30.9	31.5	32.0
8H	30.9	31.5	31.4	31.9	32.4	30.7	31.3	31.2	31.7	32.2
12H	31.2	31.6	31.6	32.1	32.6	30.9	31.4	31.4	31.9	32.4
X=12H Y=4H	29.9	30.6	30.3	31.0	31.4	29.8	30.4	30.2	30.9	31.3
6H	30.7	31.2	31.2	31.7	32.2	30.5	31.1	31.0	31.5	32.0
8H	31.0	31.5	31.5	32.0	32.5	30.9	31.3	31.4	31.8	32.3
Variations with the observer position at spacings:										
S=1.0H	+0.2/-0.2					+0.2/-0.1				
S=1.5H	+0.4/-0.5					+0.3/-0.4				
S=2.0H	+0.5/-0.9					+0.5/-0.8				

Calculate in accordance with CIE Pub.117. The table is revised with 787lm ($8\log(F/F_0) = -0.8$).

Zonal Lumen

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	285.4	0.3	0.3	0.03	0.03
1.0-2.0	285.2	0.8	1.1	0.10	0.14
2.0-3.0	285.0	1.4	2.5	0.17	0.31
3.0-4.0	284.7	1.9	4.4	0.24	0.55
4.0-5.0	284.2	2.4	6.8	0.31	0.86
5.0-6.0	283.6	3.0	9.8	0.38	1.24
6.0-7.0	282.9	3.5	13.3	0.45	1.69
7.0-8.0	282.1	4.0	17.3	0.51	2.20
8.0-9.0	281.1	4.6	21.9	0.58	2.78
9.0-10.0	280.1	5.1	27.0	0.64	3.42
10.0-11.0	278.9	5.6	32.5	0.71	4.13
11.0-12.0	277.6	6.1	38.6	0.77	4.90
12.0-13.0	276.3	6.6	45.2	0.83	5.74
13.0-14.0	274.8	7.0	52.2	0.89	6.63
14.0-15.0	273.2	7.5	59.7	0.95	7.58
15.0-16.0	271.4	8.0	67.6	1.01	8.59
16.0-17.0	269.6	8.4	76.0	1.07	9.66
17.0-18.0	267.7	8.8	84.9	1.12	10.78
18.0-19.0	265.7	9.2	94.1	1.17	11.95
19.0-20.0	263.6	9.6	103.8	1.23	13.18
20.0-21.0	261.4	10.0	113.8	1.28	14.45
21.0-22.0	259.1	10.4	124.2	1.32	15.78
22.0-23.0	256.7	10.8	135.0	1.37	17.14
23.0-24.0	254.2	11.1	146.1	1.41	18.56
24.0-25.0	251.6	11.4	157.6	1.45	20.01
25.0-26.0	249.0	11.8	169.3	1.49	21.50
26.0-27.0	246.2	12.0	181.4	1.53	23.03
27.0-28.0	243.4	12.3	193.7	1.56	24.60
28.0-29.0	240.5	12.6	206.3	1.60	26.20
29.0-30.0	237.5	12.8	219.1	1.63	27.82
30.0-31.0	234.4	13.0	232.1	1.66	29.48
31.0-32.0	231.3	13.3	245.4	1.68	31.16
32.0-33.0	228.0	13.4	258.8	1.71	32.87
33.0-34.0	224.8	13.6	272.4	1.73	34.60
34.0-35.0	221.4	13.8	286.2	1.75	36.34
35.0-36.0	218.0	13.9	300.1	1.76	38.11

C Plane (°):0.0-360.0: 10.0
 Test Lab: LABORATORIO STAND
 Test Type: TYPE C
 Temperature: 24.7
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-90.0:1.0
 Test Device: LSG-1700B
 Distance: 11.772 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 1)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	214.5	14.0	314.1	1.78	39.89
37.0-38.0	210.9	14.1	328.1	1.79	41.67
38.0-39.0	207.4	14.2	342.3	1.80	43.47
39.0-40.0	203.7	14.2	356.5	1.80	45.28
40.0-41.0	199.9	14.2	370.8	1.81	47.08
41.0-42.0	196.3	14.3	385.0	1.81	48.90
42.0-43.0	192.4	14.3	399.3	1.81	50.71
43.0-44.0	188.5	14.2	413.5	1.81	52.51
44.0-45.0	184.6	14.2	427.7	1.80	54.31
45.0-46.0	180.5	14.1	441.8	1.79	56.11
46.0-47.0	176.6	14.0	455.8	1.78	57.89
47.0-48.0	172.4	13.9	469.8	1.77	59.66
48.0-49.0	168.3	13.8	483.6	1.76	61.42
49.0-50.0	164.2	13.7	497.3	1.74	63.16
50.0-51.0	160.0	13.5	510.8	1.72	64.88
51.0-52.0	155.7	13.4	524.2	1.70	66.57
52.0-53.0	151.5	13.2	537.4	1.67	68.25
53.0-54.0	147.1	13.0	550.4	1.65	69.89
54.0-55.0	142.9	12.8	563.1	1.62	71.51
55.0-56.0	138.5	12.5	575.6	1.59	73.10
56.0-57.0	134.0	12.3	587.9	1.56	74.66
57.0-58.0	129.8	12.0	599.9	1.52	76.18
58.0-59.0	125.3	11.7	611.6	1.49	77.67
59.0-60.0	120.8	11.4	623.0	1.45	79.12
60.0-61.0	116.3	11.1	634.1	1.41	80.53
61.0-62.0	111.8	10.8	644.9	1.37	81.90
62.0-63.0	107.4	10.4	655.3	1.33	83.22
63.0-64.0	102.8	10.1	665.4	1.28	84.51
64.0-65.0	98.3	9.7	675.1	1.24	85.74
65.0-66.0	93.9	9.4	684.5	1.19	86.93
66.0-67.0	89.3	9.0	693.5	1.14	88.07
67.0-68.0	84.8	8.6	702.1	1.09	89.16
68.0-69.0	80.3	8.2	710.3	1.04	90.20
69.0-70.0	75.8	7.8	718.1	0.99	91.19
70.0-71.0	71.4	7.4	725.4	0.94	92.13
71.0-72.0	67.0	7.0	732.4	0.88	93.01

C Plane (°):0.0-360.0: 10.0
 Test Lab: LABORATORIO STAND
 Test Type: TYPE C
 Temperature: 24.7
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-90.0:1.0
 Test Device: LSG-1700B
 Distance: 11.772 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 2)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	62.6	6.5	738.9	0.83	93.84
73.0-74.0	58.3	6.1	745.1	0.78	94.62
74.0-75.0	53.9	5.7	750.8	0.72	95.35
75.0-76.0	49.7	5.3	756.1	0.67	96.02
76.0-77.0	45.4	4.8	760.9	0.62	96.63
77.0-78.0	41.2	4.4	765.3	0.56	97.19
78.0-79.0	37.2	4.0	769.3	0.51	97.70
79.0-80.0	33.2	3.6	772.9	0.45	98.16
80.0-81.0	29.2	3.2	776.0	0.40	98.56
81.0-82.0	25.4	2.8	778.8	0.35	98.91
82.0-83.0	21.5	2.3	781.1	0.30	99.20
83.0-84.0	17.8	1.9	783.1	0.25	99.45
84.0-85.0	14.2	1.5	784.6	0.20	99.65
85.0-86.0	10.6	1.2	785.8	0.15	99.79
86.0-87.0	7.4	0.8	786.6	0.10	99.90
87.0-88.0	4.4	0.5	787.1	0.06	99.96
88.0-89.0	2.1	0.2	787.3	0.03	99.99
89.0-90.0	0.8	0.1	787.4	0.01	100.00

C Plane (°):0.0-360.0: 10.0
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Gamma Plane (°):0.0-90.0:1.0
 Test Device: LSG-1700B
 Distance: 11.772 m
 Humidity:
 Inspector: