

Report No.: MSL-401

Test Time: 2023-08-18 08:30

## Luminaire Property

Luminaire Manufacturer: Stand Iluminaciones S.A.S

Luminaire Category: Exterior

Luminaire Description: Lum Street Led Farol 40W

Luminous Length (mm): 222

Luminous Width (mm): 222

Voltage: 219.7 V

Current: 0.190 A

Power: 40.96 W

Power Factor: 0.977

## Photometric Results

CIE Class: Direct

Total Rated Lamp Lumens: 4341.9 lm

Measurement Flux: 4341.9 lm

Efficiency: 100%

Downward Ratio: 98%

Upward Ratio: 2%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 164.4, 164.1, 164.0, 164.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 152.8, 154.7, 152.5, 152.5

Luminaire Efficacy Rating (LER): 106.05

Central Intensity: 257.94 cd

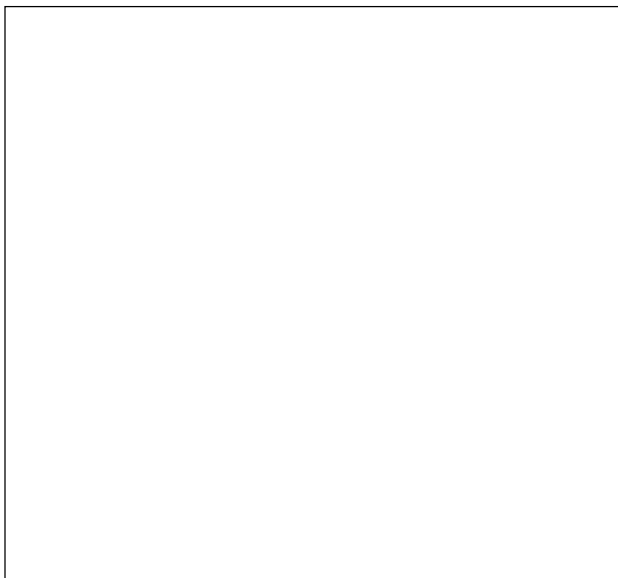
Max. Intensity: 1220.49 cd

Pos of Max. Intensity: H80 V66

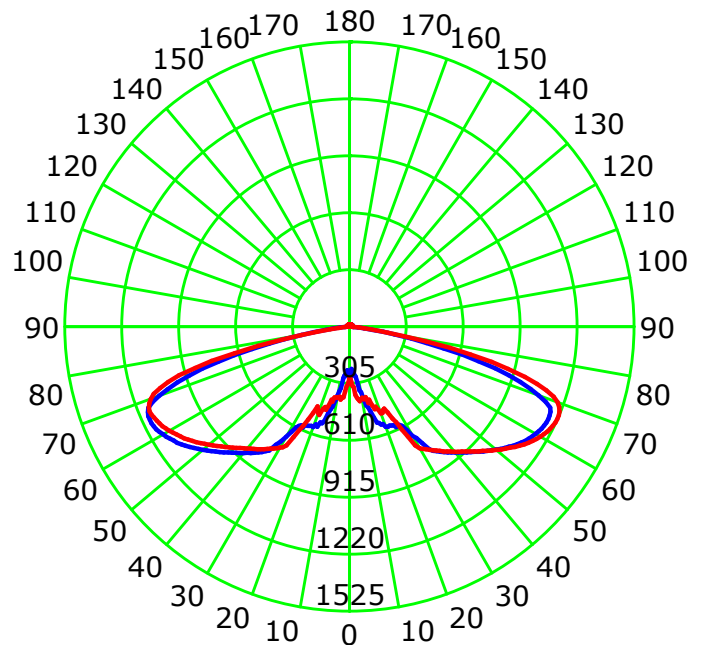
S/MH(C0/C180): 3.65

S/MH(C90/C270): 3.56

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

C Plane (°):0.0-360.0: 10.0

Test Lab: LABORATORIO STAND

Test Type: TYPE C

Temperature: 24.8 °C

Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0

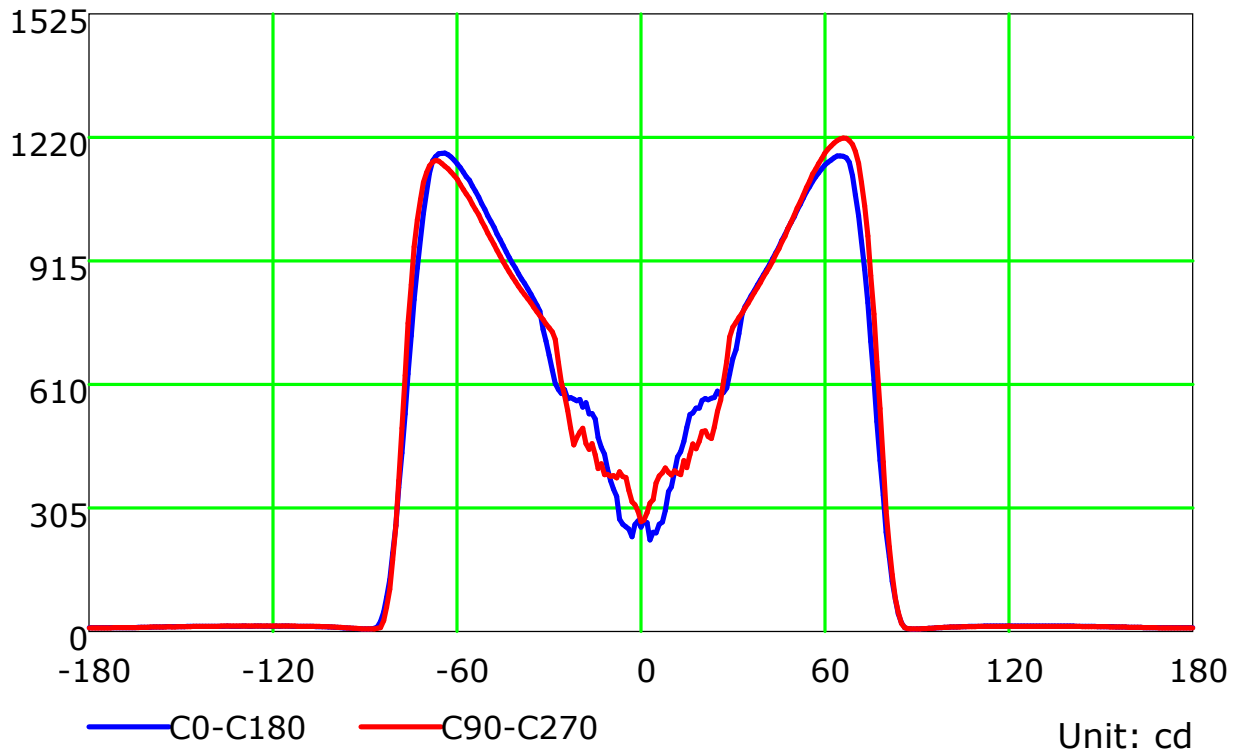
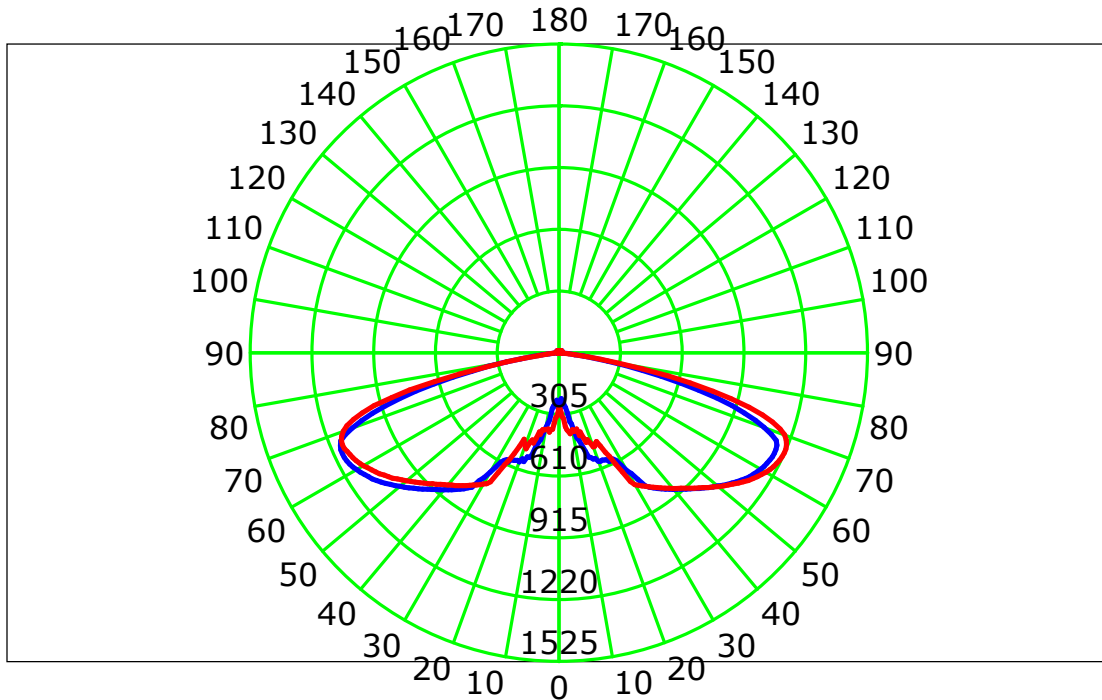
Test Device: LSG-1700B — C90-C270

Distance: 11.931 m

Humidity: 43.1 %

Inspector:

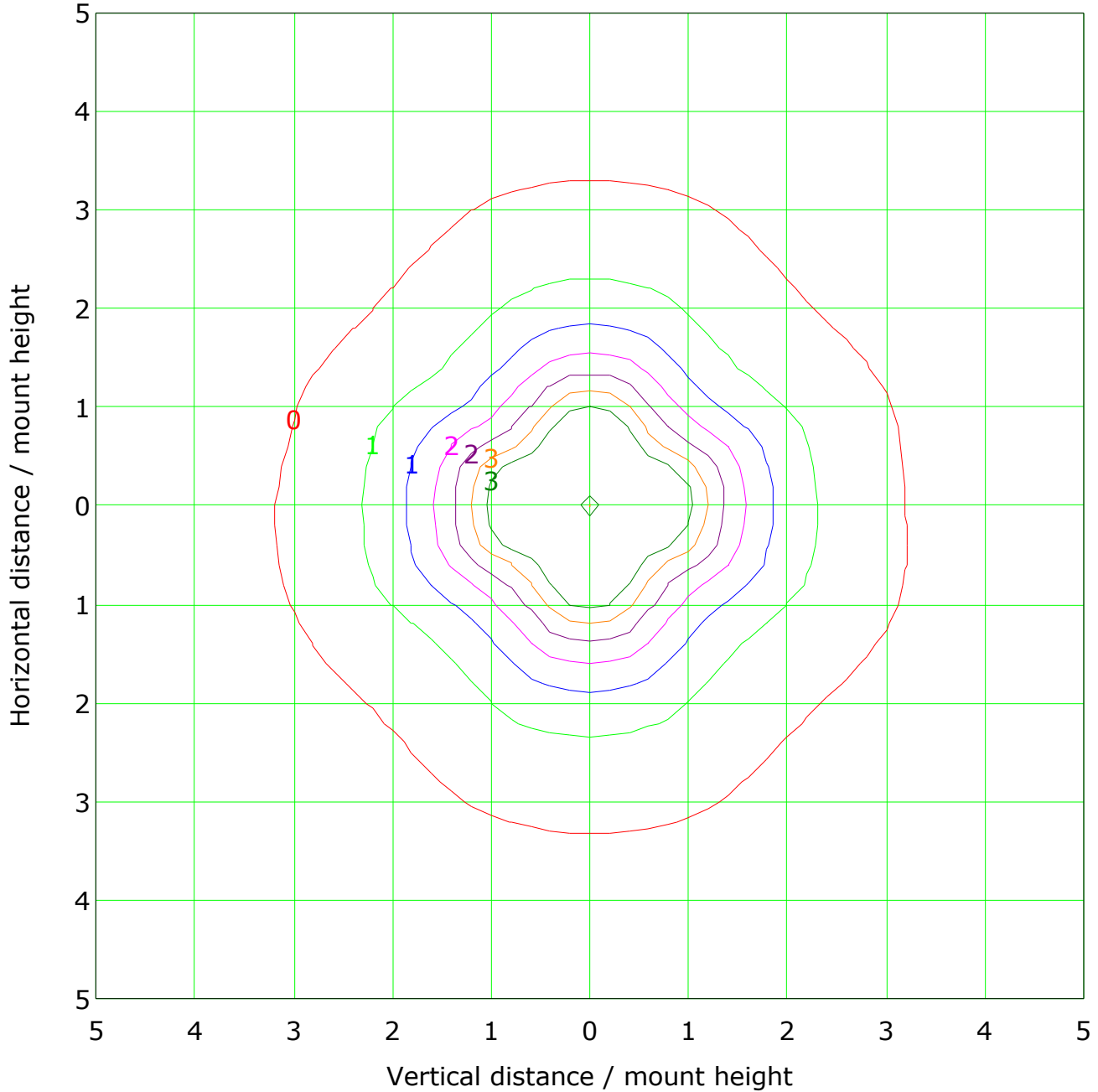
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0  
 Test Lab: LABORATORIO STAND  
 Test Type: TYPE C  
 Temperature: 24.8 °C  
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1700B  
 Distance: 11.931 m  
 Humidity: 43.1 %  
 Inspector:

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 5.0 lx

( 5%): 0.2 lx

( 15%): 0.7 lx

( 25%): 1.2 lx

( 25%): 1.7 lx

C Plane (°): 0.0-360.0: 10.0, \, 2.2 lx

Gamma Plane (°): 0.0-180.0: 1.0

Test Lab: LABORATORIO STAND

Test Device: LSG-1700B lx

Test Type: TYPE C ( 50%): 3.2 lx

Distance: 11.931 m

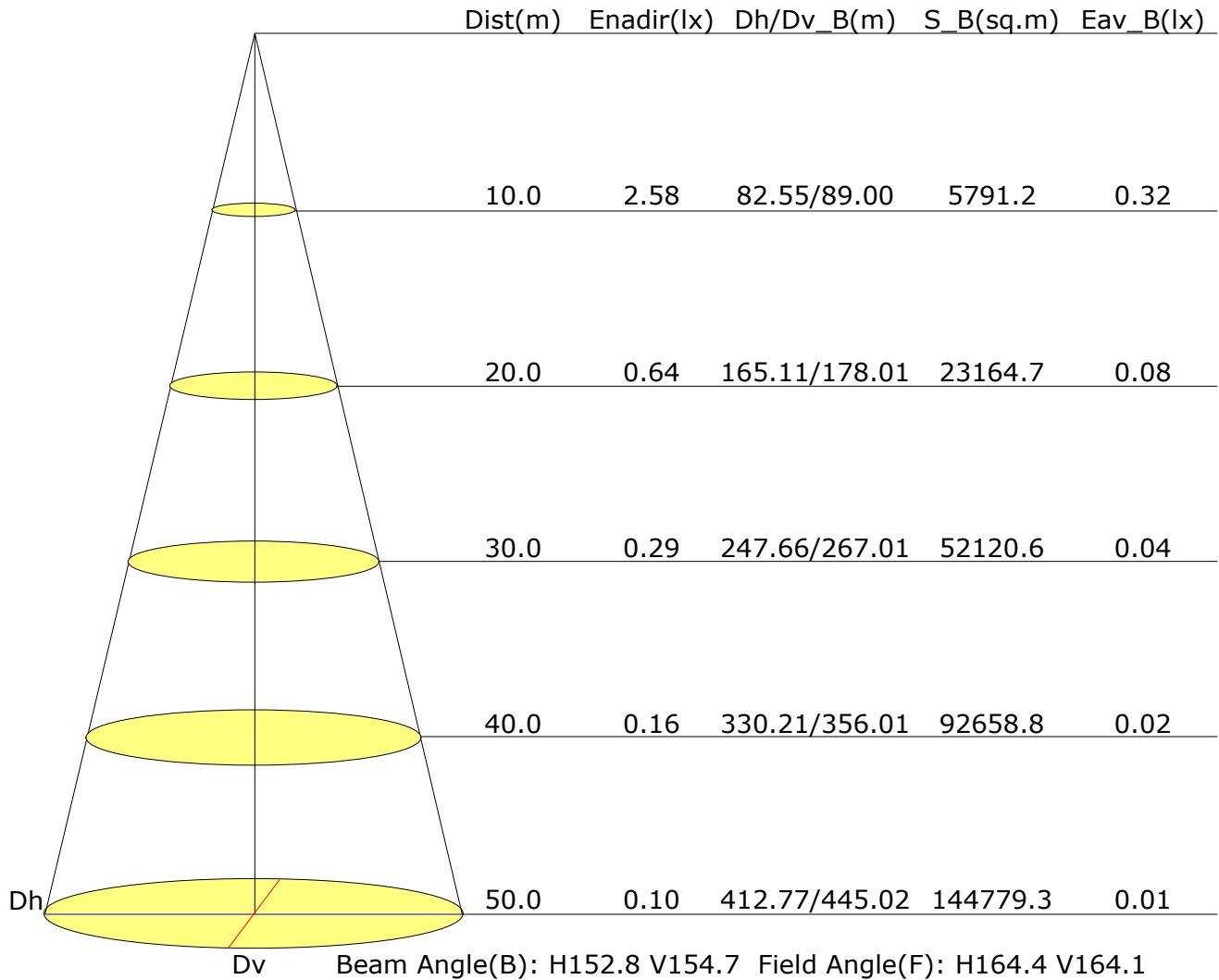
Temperature: 24.8 °C

Humidity: 43.1 %

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	26.7	28.4	27.0	28.7	29.0	26.5	28.2	26.8	28.5	28.8
3H	30.1	31.6	30.4	31.9	32.3	30.2	31.8	30.6	32.1	32.4
4H	31.1	32.6	31.5	32.9	33.3	31.6	33.1	32.0	33.4	33.8
6H	31.4	32.8	31.8	33.2	33.5	32.1	33.5	32.5	33.8	34.2
8H	31.4	32.8	31.8	33.1	33.5	32.1	33.4	32.5	33.8	34.2
12H	31.4	32.7	31.8	33.0	33.4	32.1	33.3	32.5	33.7	34.1
X=4H Y=2H	27.6	29.0	27.9	29.4	29.7	27.4	28.9	27.8	29.2	29.6
3H	31.0	32.3	31.4	32.7	33.1	31.2	32.5	31.6	32.8	33.2
4H	32.1	33.3	32.6	33.7	34.1	32.7	33.8	33.1	34.2	34.6
6H	32.5	33.5	33.0	34.0	34.4	33.2	34.3	33.7	34.7	35.1
8H	32.5	33.5	33.0	33.9	34.4	33.3	34.2	33.7	34.7	35.1
12H	32.5	33.4	33.0	33.8	34.3	33.2	34.1	33.7	34.6	35.0
X=8H Y=4H	32.4	33.3	32.8	33.7	34.2	32.9	33.8	33.3	34.2	34.7
6H	32.8	33.6	33.3	34.1	34.6	33.5	34.3	34.0	34.7	35.3
8H	32.9	33.5	33.4	34.0	34.6	33.6	34.2	34.1	34.7	35.3
12H	32.9	33.4	33.4	33.9	34.5	33.6	34.1	34.1	34.6	35.2
X=12H Y=4H	32.4	33.2	32.9	33.7	34.2	32.9	33.7	33.3	34.2	34.7
6H	32.8	33.5	33.3	34.0	34.5	33.5	34.2	34.0	34.7	35.2
8H	32.9	33.5	33.4	34.0	34.5	33.6	34.2	34.1	34.7	35.2
Variations with the observer position at spacings:										
S=1.0H	+0.1/-0.1					+0.1/-0.1				
S=1.5H	+0.2/-0.3					+0.2/-0.2				
S=2.0H	+0.4/-0.4					+0.2/-0.3				

Calculate in accordance with CIE Pub.117. The table is revised with 4342lm ( $8\log(F/F_0) = 5.1$ ).

## Zonal Lumen

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	274.0	0.3	0.3	0.01	0.01
1.0-2.0	280.7	0.8	1.1	0.02	0.02
2.0-3.0	287.1	1.4	2.4	0.03	0.06
3.0-4.0	295.0	2.0	4.4	0.05	0.10
4.0-5.0	307.7	2.6	7.1	0.06	0.16
5.0-6.0	324.6	3.4	10.5	0.08	0.24
6.0-7.0	340.7	4.2	14.7	0.10	0.34
7.0-8.0	354.0	5.1	19.8	0.12	0.46
8.0-9.0	365.7	5.9	25.7	0.14	0.59
9.0-10.0	374.7	6.8	32.5	0.16	0.75
10.0-11.0	383.5	7.7	40.1	0.18	0.92
11.0-12.0	393.5	8.6	48.7	0.20	1.12
12.0-13.0	402.9	9.6	58.3	0.22	1.34
13.0-14.0	413.3	10.6	68.9	0.24	1.59
14.0-15.0	424.5	11.7	80.5	0.27	1.86
15.0-16.0	435.9	12.8	93.3	0.29	2.15
16.0-17.0	445.7	13.9	107.2	0.32	2.47
17.0-18.0	453.3	14.9	122.1	0.34	2.81
18.0-19.0	460.4	16.0	138.2	0.37	3.18
19.0-20.0	467.7	17.1	155.3	0.39	3.58
20.0-21.0	475.2	18.2	173.5	0.42	4.00
21.0-22.0	480.2	19.3	192.8	0.44	4.44
22.0-23.0	485.4	20.4	213.2	0.47	4.91
23.0-24.0	494.7	21.6	234.8	0.50	5.41
24.0-25.0	507.9	23.1	257.9	0.53	5.94
25.0-26.0	522.7	24.7	282.6	0.57	6.51
26.0-27.0	540.7	26.5	309.1	0.61	7.12
27.0-28.0	562.7	28.5	337.6	0.66	7.77
28.0-29.0	586.0	30.7	368.2	0.71	8.48
29.0-30.0	610.6	33.0	401.2	0.76	9.24
30.0-31.0	634.0	35.3	436.5	0.81	10.05
31.0-32.0	656.2	37.6	474.1	0.87	10.92
32.0-33.0	678.7	40.0	514.1	0.92	11.84
33.0-34.0	697.8	42.2	556.3	0.97	12.81
34.0-35.0	715.0	44.4	600.7	1.02	13.84
35.0-36.0	730.9	46.5	647.3	1.07	14.91

C Plane (°):0.0-360.0: 10.0  
 Test Lab: LABORATORIO STAND  
 Test Type: TYPE C  
 Temperature: 24.8 °C  
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1700B  
 Distance: 11.931 m  
 Humidity: 43.1 %  
 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	744.2	48.5	695.8	1.12	16.03
37.0-38.0	757.0	50.5	746.3	1.16	17.19
38.0-39.0	768.7	52.5	798.8	1.21	18.40
39.0-40.0	780.3	54.4	853.2	1.25	19.65
40.0-41.0	792.2	56.4	909.7	1.30	20.95
41.0-42.0	804.1	58.4	968.1	1.35	22.30
42.0-43.0	816.8	60.5	1028.6	1.39	23.69
43.0-44.0	829.7	62.6	1091.2	1.44	25.13
44.0-45.0	842.8	64.8	1156.0	1.49	26.62
45.0-46.0	856.6	67.0	1223.0	1.54	28.17
46.0-47.0	870.5	69.2	1292.3	1.59	29.76
47.0-48.0	885.1	71.6	1363.8	1.65	31.41
48.0-49.0	899.9	73.9	1437.7	1.70	33.11
49.0-50.0	914.3	76.2	1514.0	1.76	34.87
50.0-51.0	929.4	78.6	1592.6	1.81	36.68
51.0-52.0	944.1	81.0	1673.6	1.87	38.55
52.0-53.0	958.4	83.4	1757.0	1.92	40.47
53.0-54.0	972.7	85.7	1842.8	1.97	42.44
54.0-55.0	986.2	88.0	1930.8	2.03	44.47
55.0-56.0	999.5	90.3	2021.1	2.08	46.55
56.0-57.0	1012.1	92.5	2113.7	2.13	48.68
57.0-58.0	1023.2	94.6	2208.3	2.18	50.86
58.0-59.0	1034.3	96.7	2305.0	2.23	53.09
59.0-60.0	1044.8	98.7	2403.7	2.27	55.36
60.0-61.0	1054.4	100.6	2504.4	2.32	57.68
61.0-62.0	1063.1	102.5	2606.8	2.36	60.04
62.0-63.0	1070.5	104.1	2711.0	2.40	62.44
63.0-64.0	1076.9	105.7	2816.6	2.43	64.87
64.0-65.0	1081.6	107.1	2923.7	2.47	67.34
65.0-66.0	1084.2	108.2	3031.9	2.49	69.83
66.0-67.0	1084.3	109.0	3140.9	2.51	72.34
67.0-68.0	1080.2	109.4	3250.4	2.52	74.86
68.0-69.0	1069.2	109.1	3359.4	2.51	77.37
69.0-70.0	1049.1	107.8	3467.2	2.48	79.85
70.0-71.0	1019.0	105.3	3572.5	2.43	82.28
71.0-72.0	974.4	101.3	3673.9	2.33	84.61

C Plane (°):0.0-360.0: 10.0  
 Test Lab: LABORATORIO STAND  
 Test Type: TYPE C  
 Temperature: 24.8 °C  
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1700B  
 Distance: 11.931 m  
 Humidity: 43.1 %  
 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	916.3	95.8	3769.7	2.21	86.82
73.0-74.0	848.0	89.2	3858.9	2.05	88.88
74.0-75.0	765.6	80.9	3939.8	1.86	90.74
75.0-76.0	675.8	71.7	4011.5	1.65	92.39
76.0-77.0	580.7	61.9	4073.4	1.43	93.82
77.0-78.0	483.8	51.8	4125.2	1.19	95.01
78.0-79.0	391.5	42.1	4167.3	0.97	95.98
79.0-80.0	300.5	32.4	4199.7	0.75	96.73
80.0-81.0	220.4	23.8	4223.6	0.55	97.27
81.0-82.0	155.3	16.8	4240.4	0.39	97.66
82.0-83.0	102.2	11.1	4251.5	0.26	97.92
83.0-84.0	62.9	6.8	4258.4	0.16	98.08
84.0-85.0	34.9	3.8	4262.2	0.09	98.16
85.0-86.0	18.0	2.0	4264.1	0.05	98.21
86.0-87.0	10.8	1.2	4265.3	0.03	98.24
87.0-88.0	8.2	0.9	4266.2	0.02	98.26
88.0-89.0	7.4	0.8	4267.0	0.02	98.28
89.0-90.0	7.3	0.8	4267.8	0.02	98.29
90.0-91.0	7.5	0.8	4268.6	0.02	98.31
91.0-92.0	7.7	0.8	4269.5	0.02	98.33
92.0-93.0	8.0	0.9	4270.4	0.02	98.35
93.0-94.0	8.3	0.9	4271.3	0.02	98.37
94.0-95.0	8.6	0.9	4272.2	0.02	98.40
95.0-96.0	9.0	1.0	4273.2	0.02	98.42
96.0-97.0	9.4	1.0	4274.2	0.02	98.44
97.0-98.0	9.7	1.1	4275.3	0.02	98.47
98.0-99.0	10.1	1.1	4276.4	0.03	98.49
99.0-100.0	10.4	1.1	4277.5	0.03	98.52
100.0-101.0	10.7	1.2	4278.6	0.03	98.54
101.0-102.0	11.0	1.2	4279.8	0.03	98.57
102.0-103.0	11.2	1.2	4281.0	0.03	98.60
103.0-104.0	11.5	1.2	4282.2	0.03	98.63
104.0-105.0	11.6	1.2	4283.5	0.03	98.65
105.0-106.0	11.8	1.2	4284.7	0.03	98.68
106.0-107.0	11.9	1.3	4286.0	0.03	98.71
107.0-108.0	12.0	1.3	4287.2	0.03	98.74

C Plane (°):0.0-360.0: 10.0  
 Test Lab: LABORATORIO STAND  
 Test Type: TYPE C  
 Temperature: 24.8 °C  
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1700B  
 Distance: 11.931 m  
 Humidity: 43.1 %  
 Inspector:



## Zonal Lumen (Continue 3)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	12.1	1.3	4288.5	0.03	98.77
109.0-110.0	12.2	1.3	4289.8	0.03	98.80
110.0-111.0	12.3	1.3	4291.0	0.03	98.83
111.0-112.0	12.4	1.3	4292.3	0.03	98.86
112.0-113.0	12.5	1.3	4293.6	0.03	98.89
113.0-114.0	12.6	1.3	4294.8	0.03	98.92
114.0-115.0	12.7	1.3	4296.1	0.03	98.95
115.0-116.0	12.7	1.3	4297.4	0.03	98.97
116.0-117.0	12.8	1.3	4298.6	0.03	99.00
117.0-118.0	12.9	1.3	4299.9	0.03	99.03
118.0-119.0	12.9	1.2	4301.1	0.03	99.06
119.0-120.0	13.0	1.2	4302.4	0.03	99.09
120.0-121.0	13.0	1.2	4303.6	0.03	99.12
121.0-122.0	13.0	1.2	4304.8	0.03	99.15
122.0-123.0	13.1	1.2	4306.0	0.03	99.17
123.0-124.0	13.1	1.2	4307.2	0.03	99.20
124.0-125.0	13.1	1.2	4308.4	0.03	99.23
125.0-126.0	13.1	1.2	4309.6	0.03	99.26
126.0-127.0	13.2	1.2	4310.7	0.03	99.28
127.0-128.0	13.2	1.1	4311.9	0.03	99.31
128.0-129.0	13.2	1.1	4313.0	0.03	99.33
129.0-130.0	13.3	1.1	4314.1	0.03	99.36
130.0-131.0	13.3	1.1	4315.2	0.03	99.39
131.0-132.0	13.4	1.1	4316.3	0.03	99.41
132.0-133.0	13.4	1.1	4317.4	0.02	99.44
133.0-134.0	13.4	1.1	4318.5	0.02	99.46
134.0-135.0	13.5	1.1	4319.5	0.02	99.49
135.0-136.0	13.5	1.0	4320.6	0.02	99.51
136.0-137.0	13.5	1.0	4321.6	0.02	99.53
137.0-138.0	13.5	1.0	4322.6	0.02	99.56
138.0-139.0	13.4	1.0	4323.6	0.02	99.58
139.0-140.0	13.4	1.0	4324.5	0.02	99.60
140.0-141.0	13.3	0.9	4325.5	0.02	99.62
141.0-142.0	13.3	0.9	4326.4	0.02	99.64
142.0-143.0	13.2	0.9	4327.2	0.02	99.66
143.0-144.0	13.1	0.9	4328.1	0.02	99.68

C Plane (°):0.0-360.0: 10.0  
 Test Lab: LABORATORIO STAND  
 Test Type: TYPE C  
 Temperature: 24.8 °C  
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1700B  
 Distance: 11.931 m  
 Humidity: 43.1 %  
 Inspector:

## Zonal Lumen (Continue 4)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	13.0	0.8	4328.9	0.02	99.70
145.0-146.0	12.9	0.8	4329.7	0.02	99.72
146.0-147.0	12.8	0.8	4330.5	0.02	99.74
147.0-148.0	12.7	0.7	4331.3	0.02	99.76
148.0-149.0	12.6	0.7	4332.0	0.02	99.77
149.0-150.0	12.5	0.7	4332.7	0.02	99.79
150.0-151.0	12.3	0.7	4333.3	0.02	99.80
151.0-152.0	12.2	0.6	4334.0	0.01	99.82
152.0-153.0	12.1	0.6	4334.6	0.01	99.83
153.0-154.0	12.0	0.6	4335.2	0.01	99.85
154.0-155.0	11.8	0.6	4335.7	0.01	99.86
155.0-156.0	11.7	0.5	4336.3	0.01	99.87
156.0-157.0	11.5	0.5	4336.8	0.01	99.88
157.0-158.0	11.3	0.5	4337.2	0.01	99.89
158.0-159.0	11.1	0.4	4337.7	0.01	99.90
159.0-160.0	10.9	0.4	4338.1	0.01	99.91
160.0-161.0	10.7	0.4	4338.5	0.01	99.92
161.0-162.0	10.5	0.4	4338.9	0.01	99.93
162.0-163.0	10.4	0.3	4339.2	0.01	99.94
163.0-164.0	10.2	0.3	4339.5	0.01	99.95
164.0-165.0	10.0	0.3	4339.8	0.01	99.95
165.0-166.0	9.9	0.3	4340.1	0.01	99.96
166.0-167.0	9.8	0.3	4340.3	0.01	99.96
167.0-168.0	9.7	0.2	4340.6	0.01	99.97
168.0-169.0	9.7	0.2	4340.8	0.00	99.97
169.0-170.0	9.6	0.2	4341.0	0.00	99.98
170.0-171.0	9.6	0.2	4341.2	0.00	99.98
171.0-172.0	9.5	0.2	4341.3	0.00	99.99
172.0-173.0	9.5	0.1	4341.4	0.00	99.99
173.0-174.0	9.5	0.1	4341.6	0.00	99.99
174.0-175.0	9.4	0.1	4341.7	0.00	99.99
175.0-176.0	9.4	0.1	4341.7	0.00	100.00
176.0-177.0	9.4	0.1	4341.8	0.00	100.00
177.0-178.0	9.4	0.0	4341.9	0.00	100.00
178.0-179.0	9.4	0.0	4341.9	0.00	100.00
179.0-180.0	9.4	0.0	4341.9	0.00	100.00

C Plane (°):0.0-360.0: 10.0  
 Test Lab: LABORATORIO STAND  
 Test Type: TYPE C  
 Temperature: 24.8 °C  
 Operator: Cristian Herrera Arismendy

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1700B  
 Distance: 11.931 m  
 Humidity: 43.1 %  
 Inspector: