

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P563275

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563275
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3LO-35-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8324.0 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

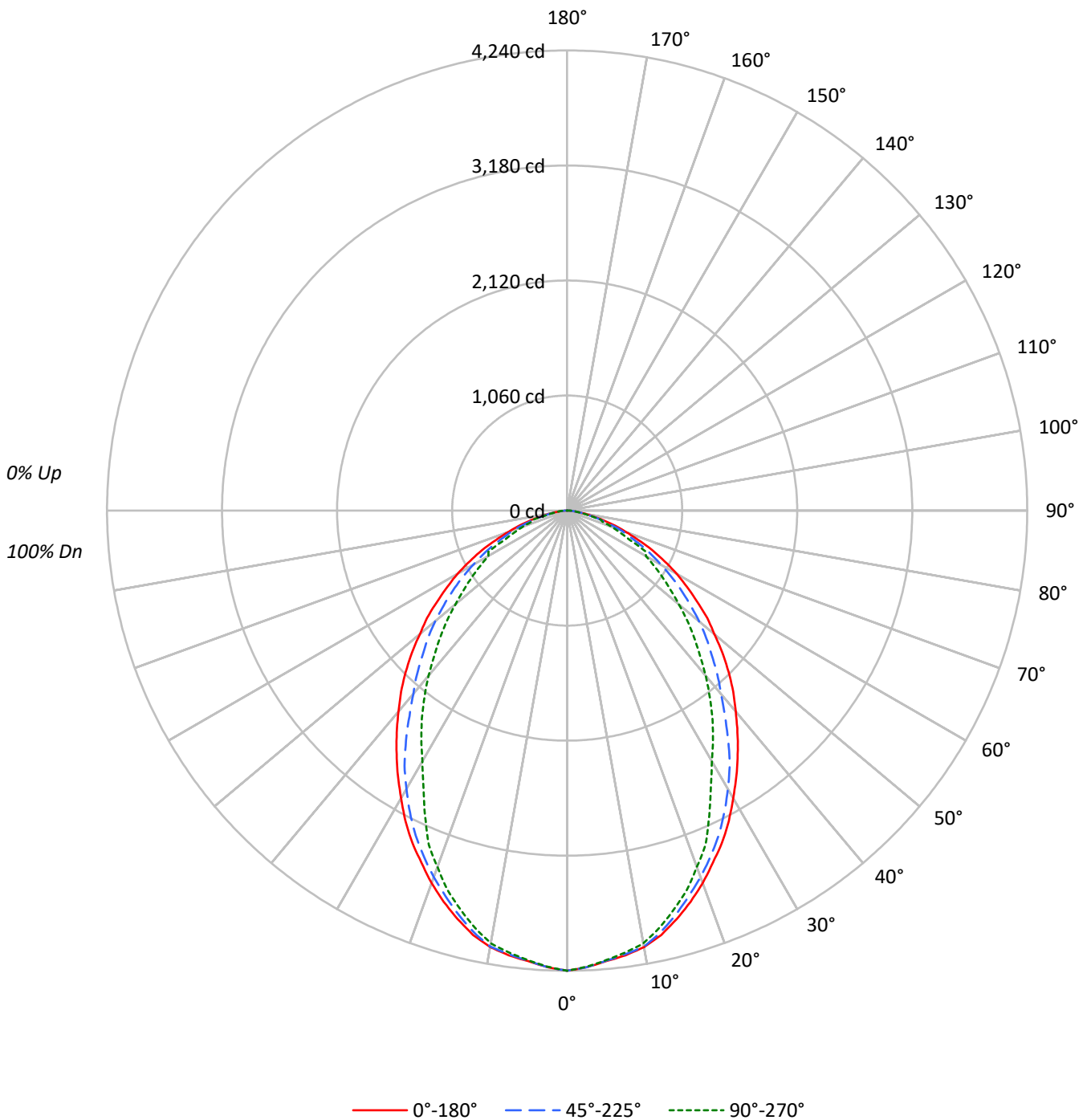
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5705	5705	5705
5°	5628	5621	5614
10°	5579	5572	5532
15°	5428	5374	5299
20°	5229	5145	5004
25°	5014	4905	4599
30°	4752	4600	4143
35°	4501	4251	3833
40°	4245	3874	3487
45°	4001	3582	3153
50°	3704	3324	2811
55°	3427	3013	2518
60°	3139	2691	2256
65°	2762	2357	1997
70°	2275	2063	1697
75°	1809	1580	1656
80°	1216	1140	1064
85°	756	908	1059

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4001 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	394.7	4.7
10°-20°	1083.2	13.0
20°-30°	1499.6	18.0
30°-40°	1599.1	19.2
40°-50°	1458.8	17.5
50°-60°	1142.9	13.7
60°-70°	744.9	8.9
70°-80°	330.0	4.0
80°-90°	70.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2977.6	35.8
0°-40°	4576.6	55.0
0°-60°	7178.3	86.2
0°-90°	8324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8324.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4240	4240	4240	4240	4240	
5°	4167	4162	4162	4157	4157	396
15°	3897	3897	3858	3819	3804	1096
25°	3377	3358	3304	3186	3098	1551
35°	2740	2720	2588	2392	2333	1713
45°	2103	2059	1882	1726	1657	1620
55°	1461	1417	1284	1132	1074	1310
65°	868	819	740	755	627	855
75°	348	324	304	289	319	373
85°	49	54	59	64	69	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4240.1	4240.1	4240.1	4240.1	4240.1
2.5°	4210.7	4210.7	4210.7	4205.8	4205.8
5°	4166.6	4161.7	4161.7	4156.8	4156.8
7.5°	4132.3	4127.4	4122.5	4117.6	4107.8
10°	4083.3	4083.3	4078.4	4053.9	4049.0
12.5°	4004.8	3999.9	3980.3	3946.0	3936.2
15°	3897.0	3897.0	3857.8	3818.6	3803.9
17.5°	3779.4	3774.5	3725.4	3686.2	3666.6
20°	3651.9	3642.1	3593.1	3529.4	3495.0
22.5°	3509.8	3509.8	3450.9	3367.6	3333.3
25°	3377.4	3357.8	3303.9	3186.2	3098.0
27.5°	3225.4	3196.0	3137.2	2970.5	2867.6
30°	3058.8	3044.1	2960.7	2745.1	2666.6
32.5°	2901.9	2877.4	2789.2	2563.7	2500.0
35°	2740.2	2720.5	2588.2	2392.1	2333.3
37.5°	2578.4	2553.9	2387.2	2230.4	2156.8
40°	2416.6	2387.2	2205.9	2063.7	1985.3
42.5°	2264.7	2225.5	2049.0	1897.0	1808.8
45°	2102.9	2058.8	1882.3	1725.5	1656.8
47.5°	1941.1	1901.9	1740.2	1578.4	1500.0
50°	1769.6	1735.3	1588.2	1426.4	1343.1
52.5°	1627.4	1573.5	1431.4	1269.6	1201.0
55°	1460.8	1416.6	1284.3	1132.3	1073.5
57.5°	1308.8	1264.7	1142.1	1000.0	951.0
60°	1166.6	1102.9	1000.0	877.4	838.2
62.5°	1009.8	960.8	872.5	769.6	818.6
65°	867.6	818.6	740.2	754.9	627.4
67.5°	710.8	686.3	617.6	549.0	529.4
70°	578.4	549.0	524.5	451.0	431.4
72.5°	460.8	431.4	397.1	357.8	343.1
75°	348.0	323.5	303.9	289.2	318.6
77.5°	240.2	230.4	215.7	201.0	196.1
80°	156.9	152.0	147.1	142.2	137.3
82.5°	93.1	93.1	93.1	93.1	93.1
85°	49.0	53.9	58.8	63.7	68.6
87.5°	29.4	29.4	34.3	39.2	44.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)