

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: P563995

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563995
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-LD4-4LO-50-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11160.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

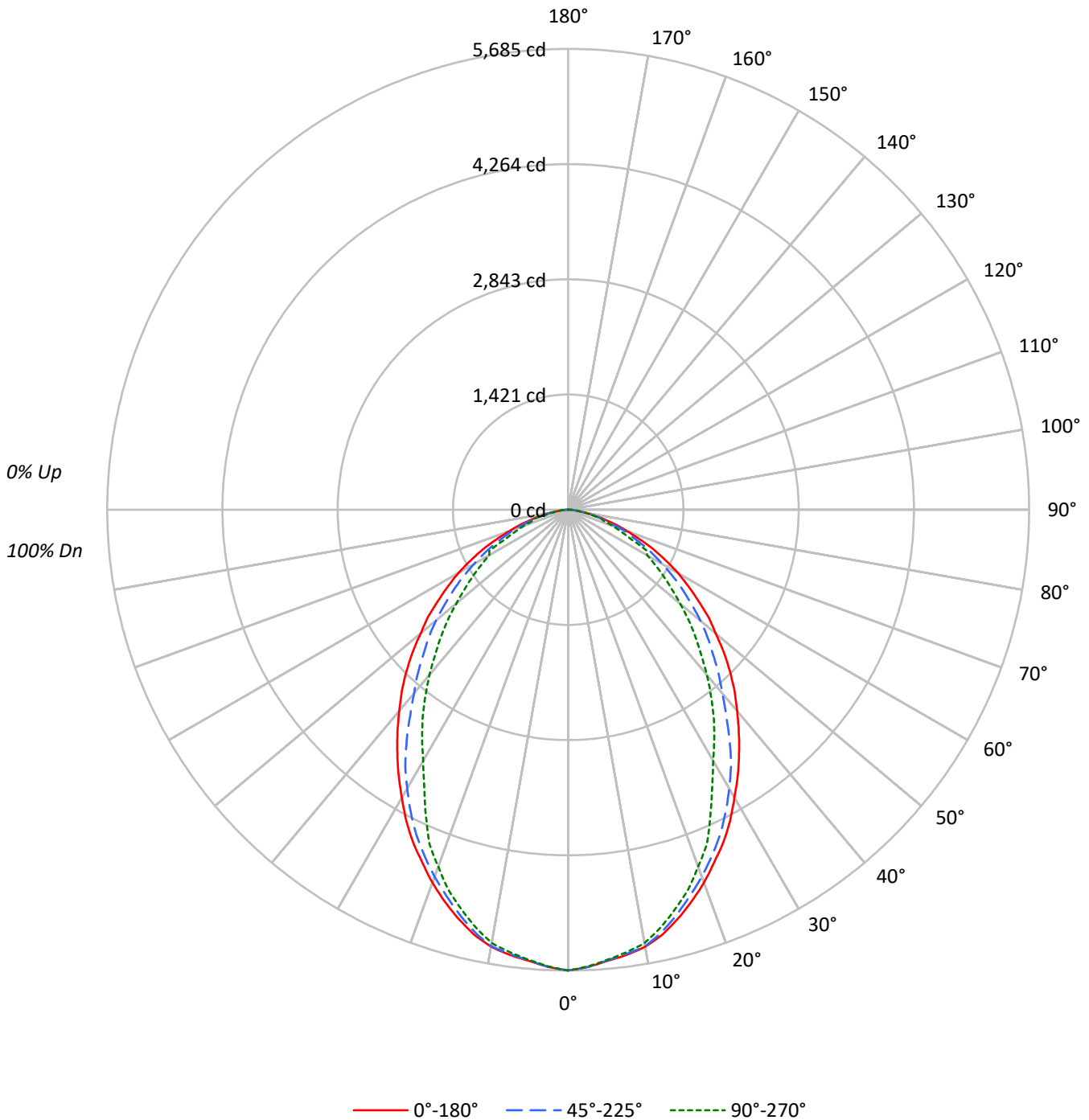
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7649	7649	7649
5°	7545	7536	7527
10°	7480	7470	7417
15°	7278	7204	7104
20°	7010	6898	6709
25°	6722	6576	6166
30°	6371	6167	5555
35°	6034	5700	5138
40°	5691	5194	4675
45°	5365	4802	4227
50°	4966	4457	3769
55°	4594	4039	3376
60°	4209	3608	3024
65°	3703	3160	2678
70°	3051	2766	2275
75°	2426	2118	2221
80°	1629	1528	1426
85°	1014	1218	1420

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5365 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	529.2	4.7
10°-20°	1452.3	13.0
20°-30°	2010.6	18.0
30°-40°	2143.9	19.2
40°-50°	1955.8	17.5
50°-60°	1532.2	13.7
60°-70°	998.6	8.9
70°-80°	442.4	4.0
80°-90°	95.0	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°	3992.0	35.8
0°-40°	6135.9	55.0
0°-60°	9623.9	86.2
0°-90°	11160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5685	5685	5685	5685	5685	
5°	5586	5580	5580	5573	5573	530
15°	5225	5225	5172	5120	5100	1469
25°	4528	4502	4430	4272	4154	2079
35°	3674	3647	3470	3207	3128	2297
45°	2819	2760	2524	2313	2221	2172
55°	1958	1899	1722	1518	1439	1757
65°	1163	1098	992	1012	841	1146
75°	467	434	408	388	427	500
85°	66	72	79	85	92	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5684.8	5684.8	5684.8	5684.8	5684.8
2.5°	5645.3	5645.3	5645.3	5638.8	5638.8
5°	5586.2	5579.6	5579.6	5573.0	5573.0
7.5°	5540.2	5533.6	5527.0	5520.5	5507.3
10°	5474.5	5474.5	5467.9	5435.0	5428.4
12.5°	5369.3	5362.7	5336.4	5290.4	5277.3
15°	5224.7	5224.7	5172.1	5119.6	5099.8
17.5°	5067.0	5060.4	4994.7	4942.1	4915.8
20°	4896.1	4883.0	4817.3	4731.8	4685.8
22.5°	4705.5	4705.5	4626.7	4514.9	4468.9
25°	4528.1	4501.8	4429.5	4271.8	4153.5
27.5°	4324.4	4284.9	4206.1	3982.6	3844.6
30°	4100.9	4081.2	3969.5	3680.3	3575.2
32.5°	3890.6	3857.7	3739.5	3437.1	3351.7
35°	3673.7	3647.4	3470.0	3207.1	3128.3
37.5°	3456.9	3424.0	3200.5	2990.2	2891.7
40°	3240.0	3200.5	2957.4	2766.8	2661.6
42.5°	3036.3	2983.7	2747.1	2543.4	2425.1
45°	2819.4	2760.2	2523.6	2313.3	2221.3
47.5°	2602.5	2549.9	2333.0	2116.2	2011.0
50°	2372.5	2326.5	2129.3	1912.4	1800.7
52.5°	2181.9	2109.6	1919.0	1702.1	1610.1
55°	1958.4	1899.3	1721.9	1518.1	1439.3
57.5°	1754.7	1695.6	1531.3	1340.7	1275.0
60°	1564.1	1478.7	1340.7	1176.4	1123.8
62.5°	1353.8	1288.1	1169.8	1031.8	1097.5
65°	1163.2	1097.5	992.4	1012.1	841.2
67.5°	952.9	920.1	828.1	736.1	709.8
70°	775.5	736.1	703.2	604.6	578.3
72.5°	617.8	578.3	532.3	479.8	460.0
75°	466.6	433.8	407.5	387.7	427.2
77.5°	322.0	308.9	289.2	269.5	262.9
80°	210.3	203.7	197.2	190.6	184.0
82.5°	124.9	124.9	124.9	124.9	124.9
85°	65.7	72.3	78.9	85.4	92.0
87.5°	39.4	39.4	46.0	52.6	59.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)