

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: P563762

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563762
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-LD4-4HI-50-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16770.0 lumens
Efficiency: N/A
Efficacy: 97.0 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

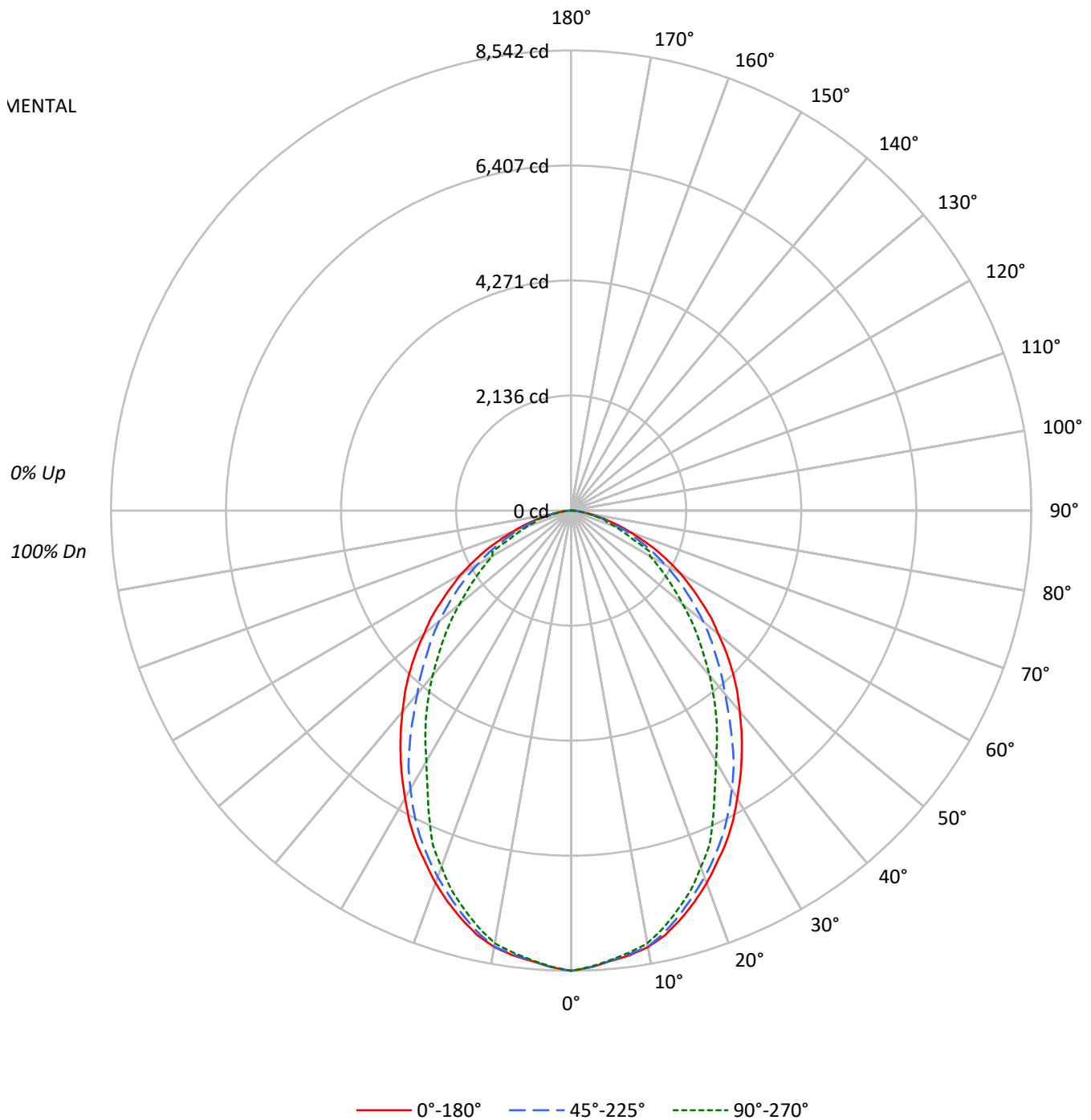
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11494	11494	11494
5°	11338	11324	11311
10°	11239	11226	11145
15°	10936	10826	10675
20°	10534	10365	10082
25°	10102	9882	9266
30°	9574	9267	8347
35°	9068	8565	7721
40°	8551	7805	7025
45°	8061	7216	6352
50°	7463	6698	5664
55°	6903	6069	5073
60°	6325	5421	4544
65°	5565	4748	4025
70°	4584	4157	3419
75°	3645	3183	3337
80°	2448	2296	2142
85°	1525	1829	2135

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8061 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	795.2	4.7
10°-20°	2182.3	13.0
20°-30°	3021.3	18.0
30°-40°	3221.6	19.2
40°-50°	2939.0	17.5
50°-60°	2302.5	13.7
60°-70°	1500.6	8.9
70°-80°	664.9	4.0
80°-90°	142.7	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°	5998.8	35.8
0°-40°	9220.3	55.0
0°-60°	14461.8	86.2
0°-90°	16770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16770.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8542	8542	8542	8542	8542	
5°	8394	8384	8384	8374	8374	797
15°	7851	7851	7772	7693	7664	2207
25°	6804	6765	6656	6419	6241	3124
35°	5520	5481	5214	4819	4701	3451
45°	4237	4148	3792	3476	3338	3263
55°	2943	2854	2587	2281	2163	2640
65°	1748	1649	1491	1521	1264	1723
75°	701	652	612	583	642	751
85°	99	109	118	128	138	137
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8542.4	8542.4	8542.4	8542.4	8542.4
2.5°	8483.2	8483.2	8483.2	8473.3	8473.3
5°	8394.3	8384.4	8384.4	8374.5	8374.5
7.5°	8325.2	8315.3	8305.4	8295.5	8275.8
10°	8226.4	8226.4	8216.5	8167.1	8157.3
12.5°	8068.4	8058.5	8019.0	7949.9	7930.1
15°	7851.1	7851.1	7772.1	7693.1	7663.5
17.5°	7614.1	7604.2	7505.5	7426.5	7387.0
20°	7357.3	7337.6	7238.8	7110.4	7041.3
22.5°	7070.9	7070.9	6952.4	6784.6	6715.4
25°	6804.3	6764.8	6656.2	6419.2	6241.4
27.5°	6498.2	6438.9	6320.4	5984.6	5777.2
30°	6162.4	6132.8	5964.9	5530.3	5372.3
32.5°	5846.4	5797.0	5619.2	5165.0	5036.6
35°	5520.5	5481.0	5214.3	4819.3	4700.8
37.5°	5194.6	5145.2	4809.4	4493.4	4345.3
40°	4868.7	4809.4	4444.0	4157.6	3999.6
42.5°	4562.5	4483.5	4128.0	3821.9	3644.1
45°	4236.6	4147.8	3792.2	3476.2	3338.0
47.5°	3910.7	3831.7	3505.8	3180.0	3021.9
50°	3565.1	3496.0	3199.7	2873.8	2705.9
52.5°	3278.7	3170.1	2883.7	2557.8	2419.5
55°	2942.9	2854.1	2587.4	2281.3	2162.8
57.5°	2636.8	2547.9	2301.0	2014.6	1915.9
60°	2350.4	2222.0	2014.6	1767.7	1688.7
62.5°	2034.4	1935.6	1757.9	1550.5	1649.2
65°	1748.0	1649.2	1491.2	1520.8	1264.1
67.5°	1432.0	1382.6	1244.3	1106.1	1066.6
70°	1165.3	1106.1	1056.7	908.6	869.1
72.5°	928.3	869.1	799.9	720.9	691.3
75°	701.2	651.8	612.3	582.7	641.9
77.5°	483.9	464.2	434.5	404.9	395.0
80°	316.0	306.1	296.3	286.4	276.5
82.5°	187.6	187.6	187.6	187.6	187.6
85°	98.8	108.6	118.5	128.4	138.3
87.5°	59.3	59.3	69.1	79.0	88.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)