

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: P562614

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562614
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-LD4-2HI-50-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8021.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

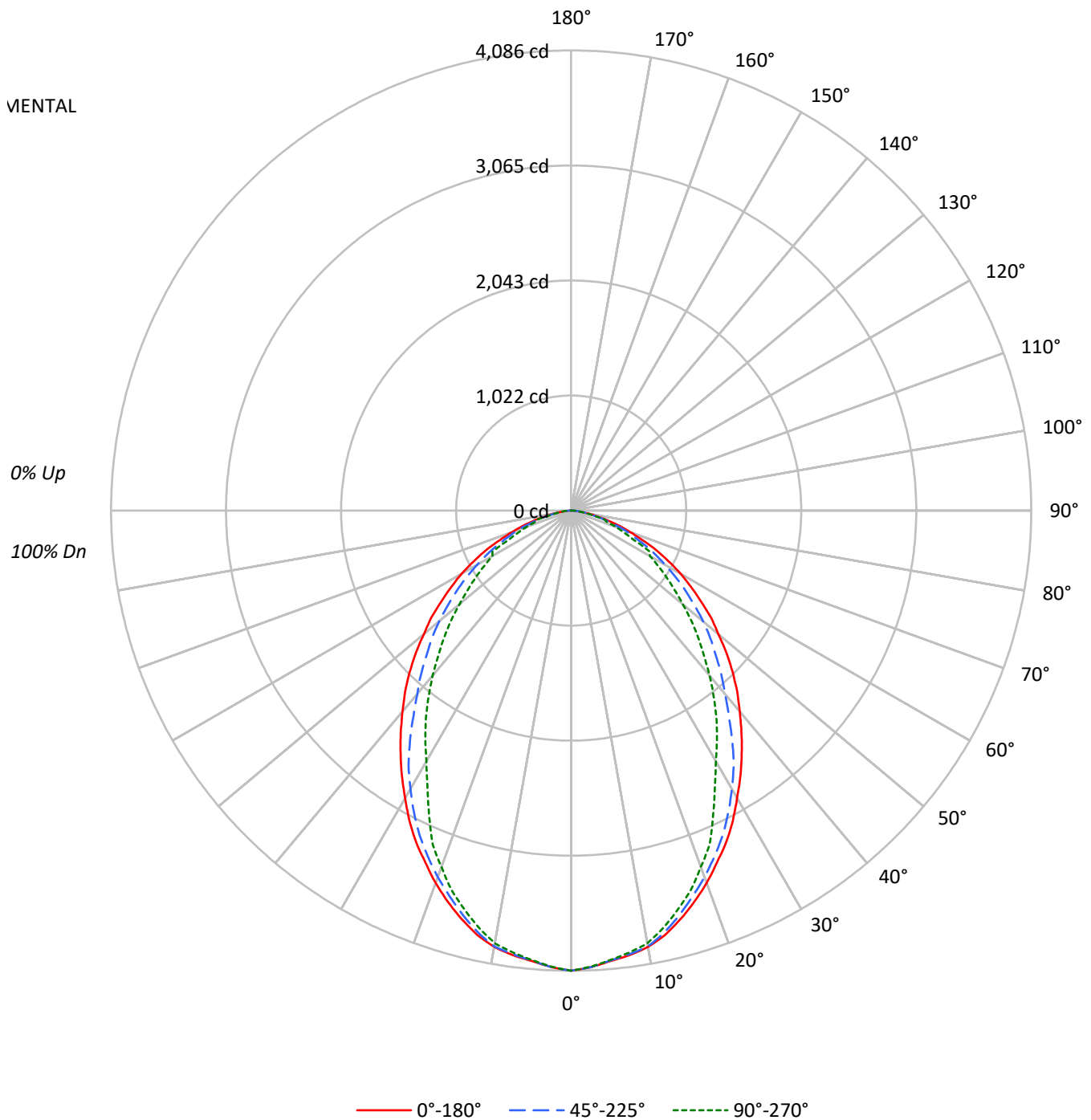
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5497	5497	5497
5°	5423	5416	5410
10°	5376	5369	5331
15°	5231	5178	5106
20°	5039	4957	4822
25°	4832	4726	4432
30°	4579	4433	3992
35°	4337	4096	3693
40°	4090	3733	3360
45°	3856	3451	3038
50°	3569	3203	2709
55°	3302	2903	2426
60°	3025	2593	2174
65°	2662	2271	1925
70°	2193	1988	1635
75°	1744	1523	1596
80°	1172	1098	1025
85°	729	875	1020

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3856 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	380.3	4.7
10°-20°	1043.8	13.0
20°-30°	1445.1	18.0
30°-40°	1540.9	19.2
40°-50°	1405.7	17.5
50°-60°	1101.3	13.7
60°-70°	717.7	8.9
70°-80°	318.0	4.0
80°-90°	68.3	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°	2869.2	35.8
0°-40°	4410.0	55.0
0°-60°	6917.0	86.2
0°-90°	8021.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8021.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4086	4086	4086	4086	4086	
5°	4015	4010	4010	4006	4006	381
15°	3755	3755	3717	3680	3665	1056
25°	3254	3236	3184	3070	2985	1494
35°	2640	2622	2494	2305	2248	1651
45°	2026	1984	1814	1663	1596	1561
55°	1408	1365	1238	1091	1034	1263
65°	836	789	713	727	605	824
75°	335	312	293	279	307	359
85°	47	52	57	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4085.8	4085.8	4085.8	4085.8	4085.8
2.5°	4057.4	4057.4	4057.4	4052.7	4052.7
5°	4014.9	4010.2	4010.2	4005.5	4005.5
7.5°	3981.9	3977.2	3972.4	3967.7	3958.3
10°	3934.6	3934.6	3929.9	3906.3	3901.6
12.5°	3859.1	3854.3	3835.4	3802.4	3792.9
15°	3755.1	3755.1	3717.4	3679.6	3665.4
17.5°	3641.8	3637.1	3589.8	3552.0	3533.1
20°	3519.0	3509.5	3462.3	3400.9	3367.8
22.5°	3382.0	3382.0	3325.3	3245.0	3212.0
25°	3254.5	3235.6	3183.6	3070.2	2985.2
27.5°	3108.0	3079.7	3023.0	2862.4	2763.2
30°	2947.4	2933.3	2853.0	2645.1	2569.6
32.5°	2796.3	2772.7	2687.6	2470.4	2409.0
35°	2640.4	2621.5	2494.0	2305.0	2248.4
37.5°	2484.5	2460.9	2300.3	2149.2	2078.3
40°	2328.7	2300.3	2125.6	1988.6	1913.0
42.5°	2182.2	2144.4	1974.4	1828.0	1743.0
45°	2026.4	1983.9	1813.8	1662.7	1596.5
47.5°	1870.5	1832.7	1676.8	1521.0	1445.4
50°	1705.2	1672.1	1530.4	1374.5	1294.2
52.5°	1568.2	1516.2	1379.2	1223.4	1157.2
55°	1407.6	1365.1	1237.5	1091.1	1034.4
57.5°	1261.2	1218.7	1100.6	963.6	916.4
60°	1124.2	1062.8	963.6	845.5	807.7
62.5°	973.0	925.8	840.8	741.6	788.8
65°	836.1	788.8	713.2	727.4	604.6
67.5°	684.9	661.3	595.2	529.0	510.1
70°	557.4	529.0	505.4	434.6	415.7
72.5°	444.0	415.7	382.6	344.8	330.6
75°	335.4	311.7	292.9	278.7	307.0
77.5°	231.4	222.0	207.8	193.7	188.9
80°	151.2	146.4	141.7	137.0	132.3
82.5°	89.7	89.7	89.7	89.7	89.7
85°	47.2	52.0	56.7	61.4	66.1
87.5°	28.3	28.3	33.1	37.8	42.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)