

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: P563416

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563416
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-50-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6134.0 lumens
Efficiency: N/A
Efficacy: 87.4 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

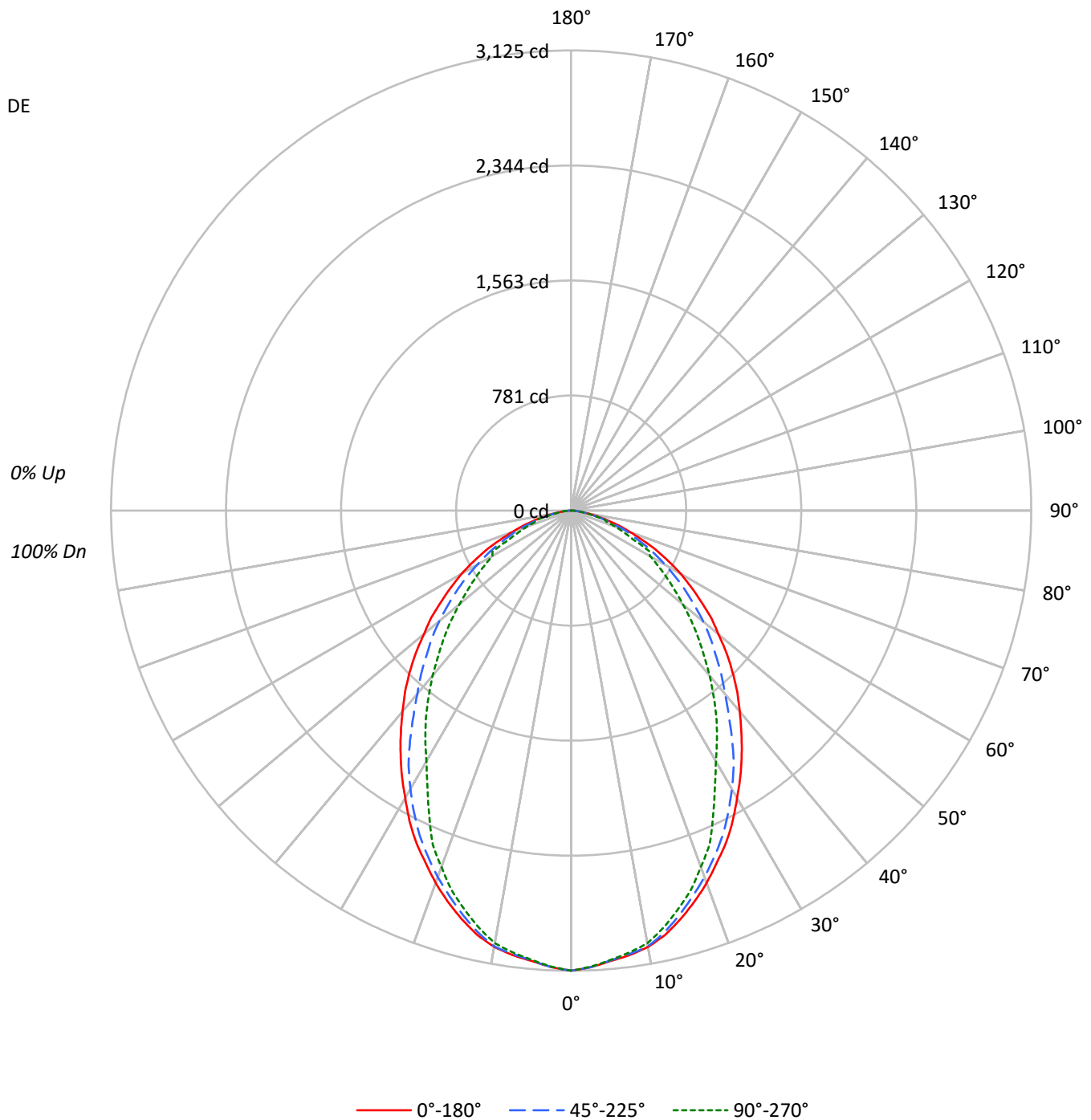
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4204	4204	4204
5°	4147	4142	4137
10°	4111	4106	4076
15°	4000	3960	3905
20°	3853	3791	3688
25°	3695	3614	3389
30°	3502	3390	3053
35°	3317	3133	2824
40°	3128	2855	2570
45°	2949	2639	2323
50°	2730	2450	2072
55°	2525	2220	1856
60°	2313	1983	1662
65°	2036	1736	1472
70°	1677	1520	1251
75°	1333	1164	1221
80°	896	840	783
85°	557	668	781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2949 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.9	4.7
10°-20°	798.2	13.0
20°-30°	1105.1	18.0
30°-40°	1178.4	19.2
40°-50°	1075.0	17.5
50°-60°	842.2	13.7
60°-70°	548.9	8.9
70°-80°	243.2	4.0
80°-90°	52.2	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°	2194.2	35.8
0°-40°	3372.5	55.0
0°-60°	5289.7	86.2
0°-90°	6134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6134.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3125	3125	3125	3125	3125	
5°	3070	3067	3067	3063	3063	291
15°	2872	2872	2843	2814	2803	807
25°	2489	2474	2435	2348	2283	1143
35°	2019	2005	1907	1763	1719	1262
45°	1550	1517	1387	1272	1221	1194
55°	1076	1044	946	834	791	965
65°	639	603	545	556	462	630
75°	256	238	224	213	235	275
85°	36	40	43	47	51	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3124.6	3124.6	3124.6	3124.6	3124.6
2.5°	3102.9	3102.9	3102.9	3099.3	3099.3
5°	3070.4	3066.8	3066.8	3063.2	3063.2
7.5°	3045.1	3041.5	3037.9	3034.3	3027.0
10°	3009.0	3009.0	3005.4	2987.3	2983.7
12.5°	2951.2	2947.6	2933.1	2907.8	2900.6
15°	2871.7	2871.7	2842.8	2813.9	2803.1
17.5°	2785.0	2781.4	2745.3	2716.4	2701.9
20°	2691.1	2683.9	2647.8	2600.8	2575.5
22.5°	2586.4	2586.4	2543.0	2481.6	2456.3
25°	2488.8	2474.4	2434.6	2347.9	2282.9
27.5°	2376.8	2355.2	2311.8	2189.0	2113.2
30°	2254.0	2243.2	2181.8	2022.8	1965.1
32.5°	2138.4	2120.4	2055.4	1889.2	1842.2
35°	2019.2	2004.8	1907.3	1762.8	1719.4
37.5°	1900.0	1882.0	1759.2	1643.6	1589.4
40°	1780.8	1759.2	1625.5	1520.7	1463.0
42.5°	1668.8	1640.0	1509.9	1397.9	1332.9
45°	1549.6	1517.1	1387.1	1271.5	1220.9
47.5°	1430.4	1401.5	1282.3	1163.1	1105.3
50°	1304.0	1278.7	1170.4	1051.2	989.8
52.5°	1199.3	1159.5	1054.8	935.6	885.0
55°	1076.4	1043.9	946.4	834.4	791.1
57.5°	964.5	932.0	841.6	736.9	700.8
60°	859.7	812.8	736.9	646.6	617.7
62.5°	744.1	708.0	643.0	567.1	603.2
65°	639.4	603.2	545.4	556.3	462.4
67.5°	523.8	505.7	455.1	404.6	390.1
70°	426.2	404.6	386.5	332.3	317.9
72.5°	339.5	317.9	292.6	263.7	252.9
75°	256.5	238.4	224.0	213.1	234.8
77.5°	177.0	169.8	158.9	148.1	144.5
80°	115.6	112.0	108.4	104.8	101.1
82.5°	68.6	68.6	68.6	68.6	68.6
85°	36.1	39.7	43.3	47.0	50.6
87.5°	21.7	21.7	25.3	28.9	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)