

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: P562115

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562115
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-LD4-1HI-50-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

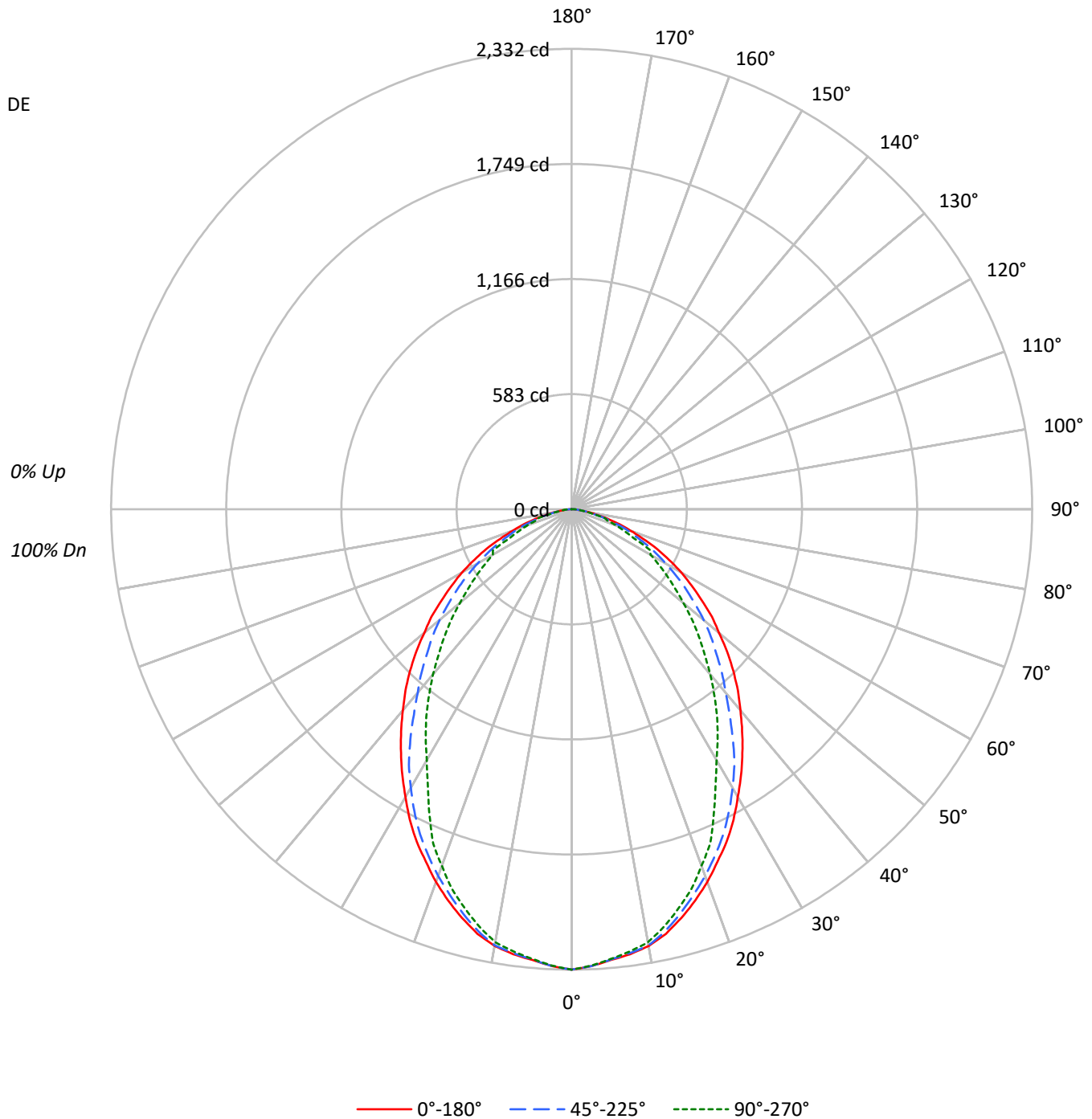
Lumens per Lamp: N/A
Luminaire Lumens: 4578.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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	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°	3138	3138	3138
5°	3095	3091	3088
10°	3068	3064	3042
15°	2986	2955	2914
20°	2876	2829	2752
25°	2758	2698	2529
30°	2614	2530	2279
35°	2475	2338	2108
40°	2334	2131	1918
45°	2201	1970	1734
50°	2037	1828	1546
55°	1885	1657	1385
60°	1727	1480	1241
65°	1519	1296	1099
70°	1251	1135	933
75°	995	869	911
80°	669	627	585
85°	417	500	582

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2201 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.1	4.7
10°-20°	595.7	13.0
20°-30°	824.8	18.0
30°-40°	879.4	19.2
40°-50°	802.3	17.5
50°-60°	628.5	13.7
60°-70°	409.7	8.9
70°-80°	181.5	4.0
80°-90°	39.0	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°	1637.6	35.8
0°-40°	2517.0	55.0
0°-60°	3947.9	86.2
0°-90°	4578.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4578.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2332	2332	2332	2332	2332	
5°	2292	2289	2289	2286	2286	218
15°	2143	2143	2122	2100	2092	603
25°	1858	1847	1817	1752	1704	853
35°	1507	1496	1423	1316	1283	942
45°	1157	1132	1035	949	911	891
55°	803	779	706	623	590	721
65°	477	450	407	415	345	470
75°	191	178	167	159	175	205
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2332.0	2332.0	2332.0	2332.0	2332.0
2.5°	2315.8	2315.8	2315.8	2313.1	2313.1
5°	2291.5	2288.8	2288.8	2286.1	2286.1
7.5°	2272.7	2270.0	2267.3	2264.6	2259.2
10°	2245.7	2245.7	2243.0	2229.5	2226.8
12.5°	2202.6	2199.9	2189.1	2170.2	2164.8
15°	2143.3	2143.3	2121.7	2100.1	2092.0
17.5°	2078.6	2075.9	2048.9	2027.3	2016.5
20°	2008.5	2003.1	1976.1	1941.1	1922.2
22.5°	1930.3	1930.3	1897.9	1852.1	1833.2
25°	1857.5	1846.7	1817.1	1752.3	1703.8
27.5°	1773.9	1757.7	1725.4	1633.7	1577.1
30°	1682.3	1674.2	1628.3	1509.7	1466.6
32.5°	1596.0	1582.5	1534.0	1410.0	1374.9
35°	1507.0	1496.2	1423.4	1315.6	1283.3
37.5°	1418.1	1404.6	1312.9	1226.6	1186.2
40°	1329.1	1312.9	1213.2	1135.0	1091.8
42.5°	1245.5	1223.9	1126.9	1043.3	994.8
45°	1156.6	1132.3	1035.2	949.0	911.2
47.5°	1067.6	1046.0	957.1	868.1	825.0
50°	973.2	954.4	873.5	784.5	738.7
52.5°	895.0	865.4	787.2	698.2	660.5
55°	803.4	779.1	706.3	622.8	590.4
57.5°	719.8	695.5	628.1	550.0	523.0
60°	641.6	606.6	550.0	482.6	461.0
62.5°	555.4	528.4	479.9	423.3	450.2
65°	477.2	450.2	407.1	415.2	345.1
67.5°	390.9	377.4	339.7	301.9	291.2
70°	318.1	301.9	288.5	248.0	237.2
72.5°	253.4	237.2	218.4	196.8	188.7
75°	191.4	177.9	167.1	159.1	175.2
77.5°	132.1	126.7	118.6	110.5	107.8
80°	86.3	83.6	80.9	78.2	75.5
82.5°	51.2	51.2	51.2	51.2	51.2
85°	27.0	29.7	32.4	35.0	37.7
87.5°	16.2	16.2	18.9	21.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)