

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: P562131

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562131
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-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

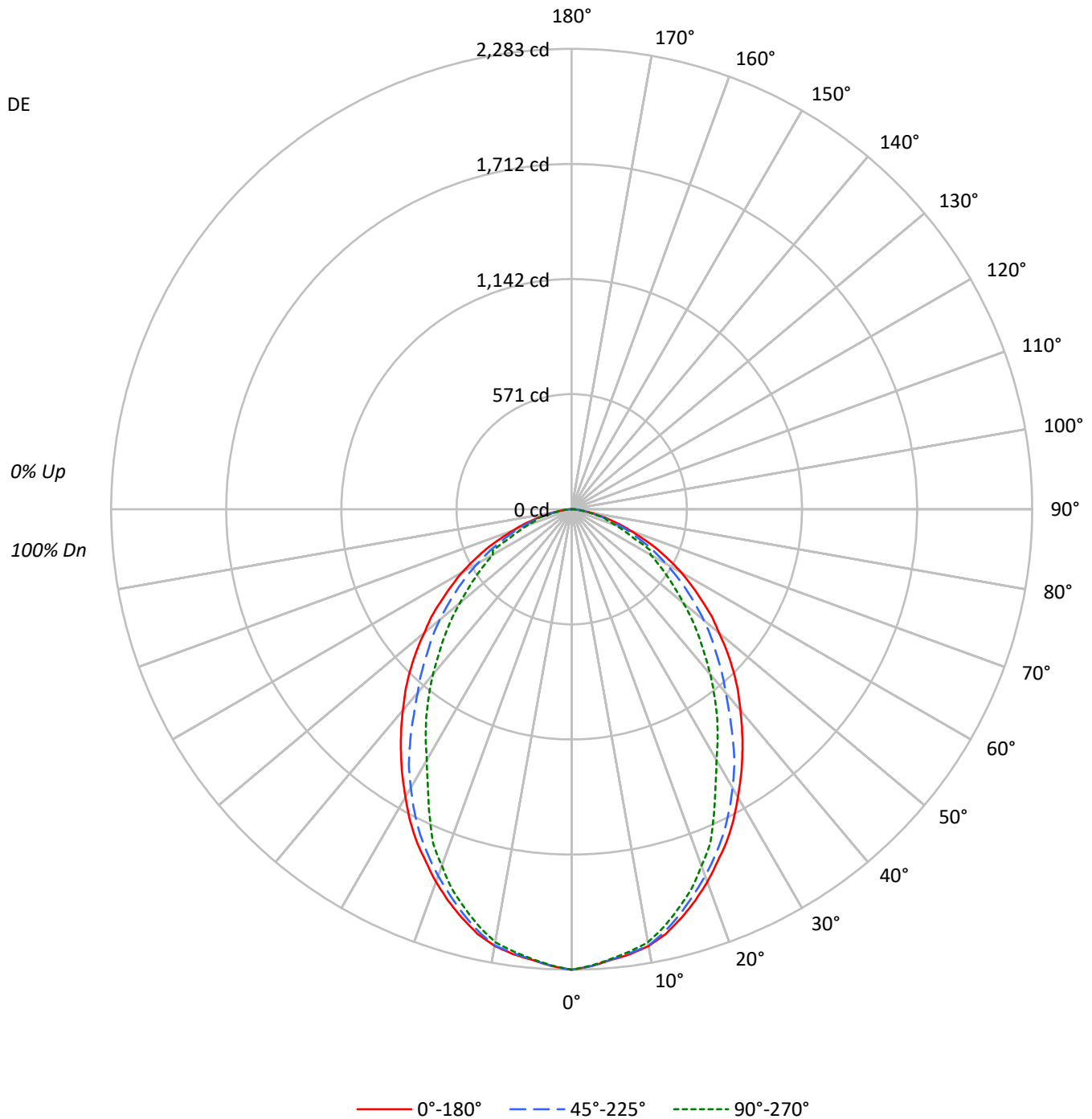
Lumens per Lamp: N/A
Luminaire Lumens: 4482.0 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	3072	3072	3072
5°	3030	3026	3023
10°	3004	3000	2979
15°	2923	2893	2853
20°	2815	2770	2695
25°	2700	2641	2476
30°	2559	2477	2231
35°	2423	2289	2064
40°	2285	2086	1878
45°	2155	1928	1697
50°	1994	1790	1514
55°	1845	1622	1356
60°	1690	1449	1214
65°	1487	1269	1075
70°	1225	1111	914
75°	974	850	892
80°	655	614	573
85°	408	489	571

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2155 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.5	4.7
10°-20°	583.3	13.0
20°-30°	807.5	18.0
30°-40°	861.0	19.2
40°-50°	785.5	17.5
50°-60°	615.4	13.7
60°-70°	401.1	8.9
70°-80°	177.7	4.0
80°-90°	38.1	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°	1603.2	35.8
0°-40°	2464.2	55.0
0°-60°	3865.1	86.2
0°-90°	4482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2283	2283	2283	2283	2283	
5°	2244	2241	2241	2238	2238	213
15°	2098	2098	2077	2056	2048	590
25°	1818	1808	1779	1716	1668	835
35°	1475	1465	1394	1288	1256	922
45°	1132	1108	1014	929	892	872
55°	786	763	692	610	578	705
65°	467	441	398	406	338	460
75°	187	174	164	156	172	201
85°	26	29	32	34	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2283.1	2283.1	2283.1	2283.1	2283.1
2.5°	2267.2	2267.2	2267.2	2264.6	2264.6
5°	2243.5	2240.8	2240.8	2238.2	2238.2
7.5°	2225.0	2222.4	2219.7	2217.1	2211.8
10°	2198.6	2198.6	2196.0	2182.8	2180.1
12.5°	2156.4	2153.7	2143.2	2124.7	2119.4
15°	2098.3	2098.3	2077.2	2056.1	2048.2
17.5°	2035.0	2032.3	2005.9	1984.8	1974.3
20°	1966.3	1961.1	1934.7	1900.4	1881.9
22.5°	1889.8	1889.8	1858.1	1813.3	1794.8
25°	1818.5	1808.0	1778.9	1715.6	1668.1
27.5°	1736.7	1720.9	1689.2	1599.5	1544.0
30°	1647.0	1639.1	1594.2	1478.1	1435.8
32.5°	1562.5	1549.3	1501.8	1380.4	1346.1
35°	1475.4	1464.9	1393.6	1288.0	1256.3
37.5°	1388.3	1375.1	1285.4	1200.9	1161.3
40°	1301.2	1285.4	1187.7	1111.2	1069.0
42.5°	1219.4	1198.3	1103.3	1021.4	973.9
45°	1132.3	1108.5	1013.5	929.1	892.1
47.5°	1045.2	1024.1	937.0	849.9	807.7
50°	952.8	934.3	855.2	768.1	723.2
52.5°	876.3	847.2	770.7	683.6	646.7
55°	786.5	762.8	691.5	609.7	578.0
57.5°	704.7	681.0	615.0	538.4	512.0
60°	628.2	593.9	538.4	472.5	451.3
62.5°	543.7	517.3	469.8	414.4	440.8
65°	467.2	440.8	398.5	406.5	337.8
67.5°	382.7	369.5	332.6	295.6	285.1
70°	311.4	295.6	282.4	242.8	232.3
72.5°	248.1	232.3	213.8	192.7	184.8
75°	187.4	174.2	163.6	155.7	171.6
77.5°	129.3	124.1	116.1	108.2	105.6
80°	84.5	81.8	79.2	76.5	73.9
82.5°	50.1	50.1	50.1	50.1	50.1
85°	26.4	29.0	31.7	34.3	37.0
87.5°	15.8	15.8	18.5	21.1	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)