

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: P562130

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562130
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-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3899.0 lumens
Efficiency: N/A
Efficacy: 90.3 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

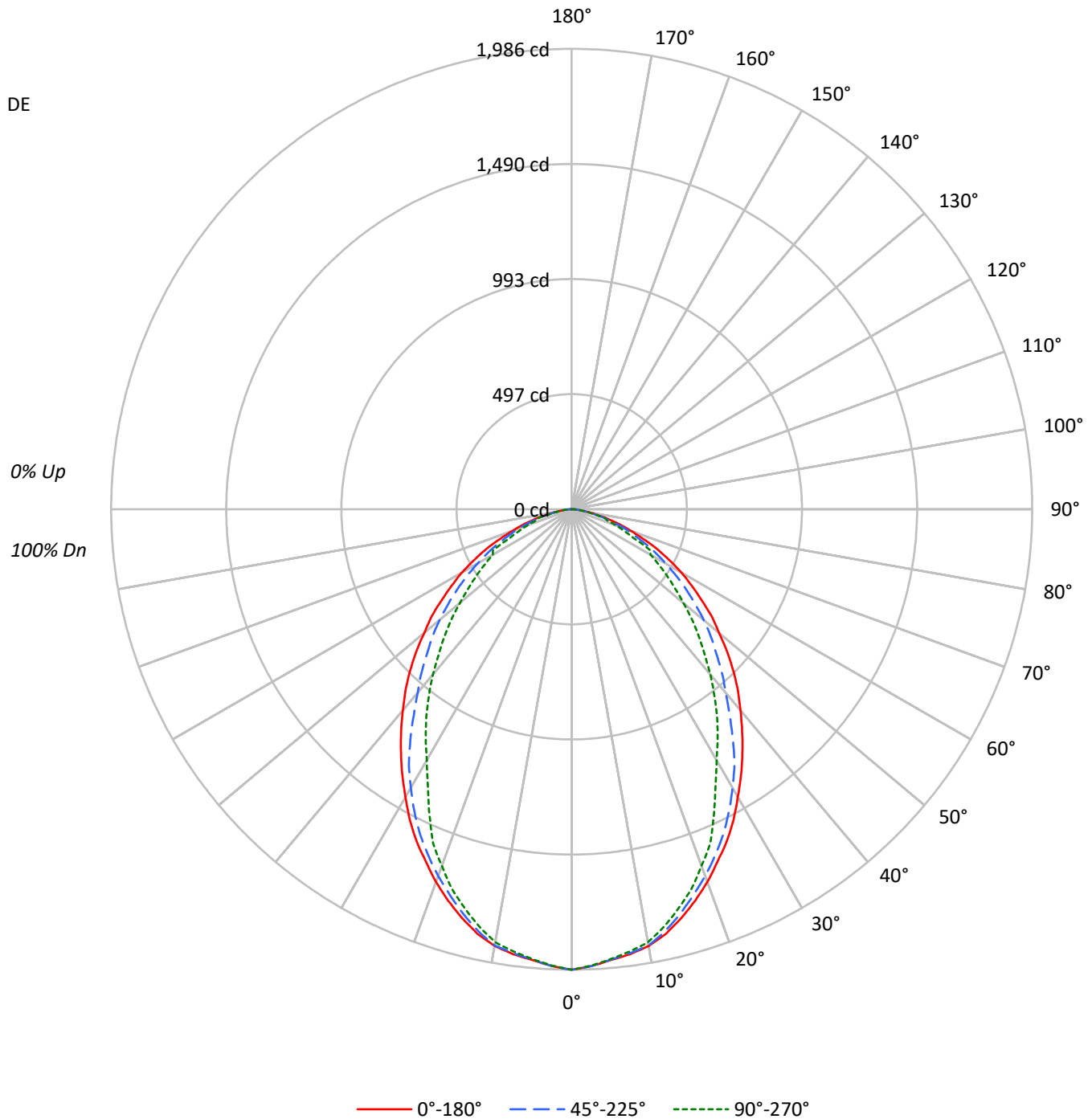
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									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°	2672	2672	2672
5°	2636	2633	2630
10°	2613	2610	2591
15°	2543	2517	2482
20°	2449	2410	2344
25°	2349	2297	2154
30°	2226	2155	1941
35°	2108	1991	1795
40°	1988	1815	1633
45°	1874	1678	1477
50°	1735	1557	1317
55°	1605	1411	1179
60°	1471	1260	1056
65°	1294	1104	936
70°	1066	967	795
75°	847	740	776
80°	570	534	498
85°	355	426	496

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1874 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.9	4.7
10°-20°	507.4	13.0
20°-30°	702.4	18.0
30°-40°	749.0	19.2
40°-50°	683.3	17.5
50°-60°	535.3	13.7
60°-70°	348.9	8.9
70°-80°	154.6	4.0
80°-90°	33.2	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°	1394.7	35.8
0°-40°	2143.7	55.0
0°-60°	3362.3	86.2
0°-90°	3899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1986	1986	1986	1986	1986	
5°	1952	1949	1949	1947	1947	185
15°	1825	1825	1807	1789	1782	513
25°	1582	1573	1548	1492	1451	726
35°	1284	1274	1212	1120	1093	802
45°	985	964	882	808	776	759
55°	684	664	602	530	503	614
65°	406	383	347	354	294	401
75°	163	152	142	136	149	175
85°	23	25	28	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1986.1	1986.1	1986.1	1986.1	1986.1
2.5°	1972.3	1972.3	1972.3	1970.0	1970.0
5°	1951.7	1949.4	1949.4	1947.1	1947.1
7.5°	1935.6	1933.3	1931.0	1928.7	1924.1
10°	1912.6	1912.6	1910.3	1898.8	1896.6
12.5°	1875.9	1873.6	1864.4	1848.3	1843.7
15°	1825.4	1825.4	1807.0	1788.6	1781.7
17.5°	1770.3	1768.0	1745.0	1726.6	1717.5
20°	1710.6	1706.0	1683.0	1653.2	1637.1
22.5°	1644.0	1644.0	1616.4	1577.4	1561.3
25°	1582.0	1572.8	1547.5	1492.4	1451.1
27.5°	1510.8	1497.0	1469.5	1391.4	1343.2
30°	1432.7	1425.9	1386.8	1285.8	1249.1
32.5°	1359.3	1347.8	1306.5	1200.8	1171.0
35°	1283.5	1274.3	1212.3	1120.5	1092.9
37.5°	1207.7	1196.3	1118.2	1044.7	1010.3
40°	1132.0	1118.2	1033.2	966.6	929.9
42.5°	1060.8	1042.4	959.8	888.6	847.2
45°	985.0	964.3	881.7	808.2	776.1
47.5°	909.2	890.9	815.1	739.3	702.6
50°	828.9	812.8	743.9	668.2	629.1
52.5°	762.3	737.0	670.5	594.7	562.5
55°	684.2	663.6	601.6	530.4	502.8
57.5°	613.1	592.4	535.0	468.4	445.4
60°	546.5	516.6	468.4	411.0	392.6
62.5°	473.0	450.0	408.7	360.5	383.4
65°	406.4	383.4	346.7	353.6	293.9
67.5°	332.9	321.4	289.3	257.2	248.0
70°	270.9	257.2	245.7	211.2	202.1
72.5°	215.8	202.1	186.0	167.6	160.7
75°	163.0	151.5	142.4	135.5	149.2
77.5°	112.5	107.9	101.0	94.1	91.8
80°	73.5	71.2	68.9	66.6	64.3
82.5°	43.6	43.6	43.6	43.6	43.6
85°	23.0	25.3	27.6	29.8	32.1
87.5°	13.8	13.8	16.1	18.4	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)