

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: P562355

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562355
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-LD4-1STD-40-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3863.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

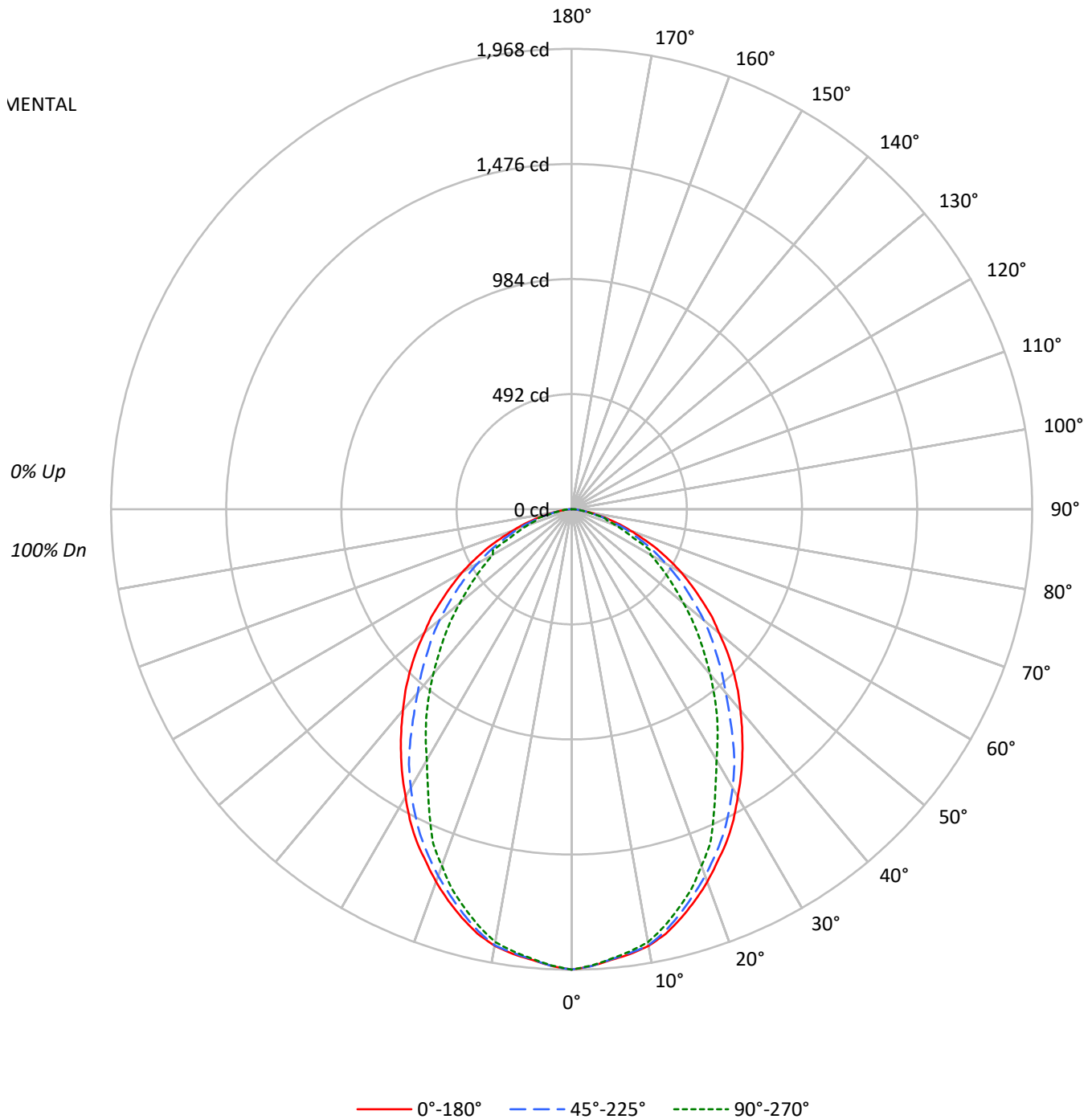
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2648	2648	2648
5°	2612	2609	2605
10°	2589	2586	2567
15°	2519	2494	2459
20°	2427	2388	2322
25°	2327	2276	2134
30°	2205	2135	1923
35°	2089	1973	1779
40°	1970	1798	1618
45°	1857	1662	1463
50°	1719	1543	1305
55°	1590	1398	1169
60°	1457	1249	1047
65°	1282	1094	927
70°	1056	958	788
75°	840	733	769
80°	564	528	494
85°	350	421	491

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1857 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.2	4.7
10°-20°	502.7	13.0
20°-30°	696.0	18.0
30°-40°	742.1	19.2
40°-50°	677.0	17.5
50°-60°	530.4	13.7
60°-70°	345.7	8.9
70°-80°	153.1	4.0
80°-90°	32.9	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°	1381.8	35.8
0°-40°	2123.9	55.0
0°-60°	3331.3	86.2
0°-90°	3863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1968	1968	1968	1968	1968	
5°	1934	1931	1931	1929	1929	184
15°	1808	1808	1790	1772	1765	508
25°	1567	1558	1533	1479	1438	720
35°	1272	1263	1201	1110	1083	795
45°	976	955	874	801	769	752
55°	678	657	596	526	498	608
65°	403	380	344	350	291	397
75°	162	150	141	134	148	173
85°	23	25	27	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1967.8	1967.8	1967.8	1967.8	1967.8
2.5°	1954.1	1954.1	1954.1	1951.8	1951.8
5°	1933.6	1931.4	1931.4	1929.1	1929.1
7.5°	1917.7	1915.4	1913.2	1910.9	1906.3
10°	1895.0	1895.0	1892.7	1881.3	1879.0
12.5°	1858.6	1856.3	1847.2	1831.3	1826.7
15°	1808.5	1808.5	1790.3	1772.1	1765.3
17.5°	1753.9	1751.6	1728.9	1710.7	1701.6
20°	1694.8	1690.2	1667.5	1637.9	1622.0
22.5°	1628.8	1628.8	1601.5	1562.8	1546.9
25°	1567.4	1558.3	1533.3	1478.7	1437.7
27.5°	1496.9	1483.2	1455.9	1378.6	1330.8
30°	1419.5	1412.7	1374.0	1273.9	1237.5
32.5°	1346.7	1335.3	1294.4	1189.8	1160.2
35°	1271.7	1262.6	1201.1	1110.1	1082.8
37.5°	1196.6	1185.2	1107.9	1035.1	1000.9
40°	1121.5	1107.9	1023.7	957.7	921.3
42.5°	1051.0	1032.8	950.9	880.4	839.4
45°	975.9	955.4	873.5	800.8	768.9
47.5°	900.8	882.6	807.6	732.5	696.1
50°	821.2	805.3	737.1	662.0	623.3
52.5°	755.3	730.2	664.3	589.2	557.3
55°	677.9	657.4	596.0	525.5	498.2
57.5°	607.4	586.9	530.0	464.1	441.3
60°	541.4	511.8	464.1	407.2	389.0
62.5°	468.6	445.9	404.9	357.2	379.9
65°	402.7	379.9	343.5	350.3	291.2
67.5°	329.9	318.5	286.6	254.8	245.7
70°	268.4	254.8	243.4	209.3	200.2
72.5°	213.8	200.2	184.3	166.1	159.2
75°	161.5	150.1	141.0	134.2	147.9
77.5°	111.5	106.9	100.1	93.3	91.0
80°	72.8	70.5	68.2	66.0	63.7
82.5°	43.2	43.2	43.2	43.2	43.2
85°	22.7	25.0	27.3	29.6	31.8
87.5°	13.6	13.6	15.9	18.2	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)