

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: P562074

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562074
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-40-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3786.0 lumens
Efficiency: N/A
Efficacy: 87.6 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

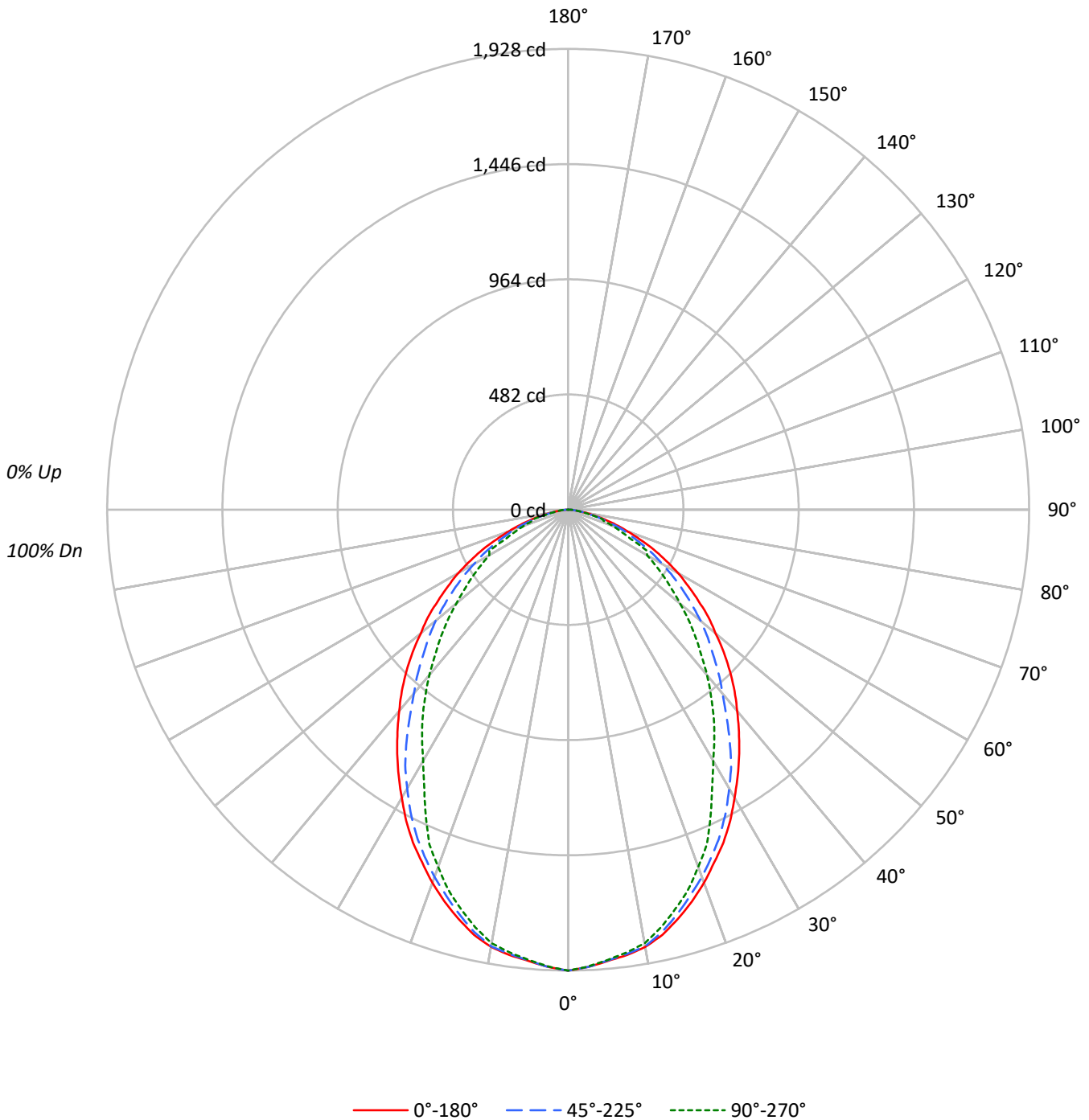
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2595	2595	2595
5°	2560	2557	2553
10°	2537	2534	2516
15°	2469	2444	2410
20°	2378	2340	2276
25°	2280	2231	2092
30°	2161	2092	1884
35°	2047	1934	1743
40°	1931	1762	1586
45°	1820	1629	1434
50°	1685	1512	1279
55°	1559	1370	1145
60°	1428	1224	1026
65°	1256	1072	909
70°	1035	939	772
75°	823	718	753
80°	552	518	483
85°	344	414	482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1820 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.5	4.7
10°-20°	492.7	13.0
20°-30°	682.1	18.0
30°-40°	727.3	19.2
40°-50°	663.5	17.5
50°-60°	519.8	13.7
60°-70°	338.8	8.9
70°-80°	150.1	4.0
80°-90°	32.2	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°	1354.3	35.8
0°-40°	2081.6	55.0
0°-60°	3264.9	86.2
0°-90°	3786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3786.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1928	1928	1928	1928	1928	
5°	1895	1893	1893	1891	1891	180
15°	1772	1772	1755	1737	1730	498
25°	1536	1527	1503	1449	1409	705
35°	1246	1237	1177	1088	1061	779
45°	956	936	856	785	754	737
55°	664	644	584	515	488	596
65°	395	372	337	343	285	389
75°	158	147	138	132	145	170
85°	22	24	27	29	31	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1928.5	1928.5	1928.5	1928.5	1928.5
2.5°	1915.2	1915.2	1915.2	1912.9	1912.9
5°	1895.1	1892.9	1892.9	1890.6	1890.6
7.5°	1879.5	1877.3	1875.0	1872.8	1868.3
10°	1857.2	1857.2	1855.0	1843.8	1841.6
12.5°	1821.5	1819.3	1810.4	1794.8	1790.3
15°	1772.5	1772.5	1754.6	1736.8	1730.1
17.5°	1719.0	1716.7	1694.4	1676.6	1667.7
20°	1661.0	1656.5	1634.2	1605.3	1589.7
22.5°	1596.3	1596.3	1569.6	1531.7	1516.1
25°	1536.1	1527.2	1502.7	1449.2	1409.1
27.5°	1467.0	1453.6	1426.9	1351.1	1304.3
30°	1391.2	1384.5	1346.6	1248.5	1212.9
32.5°	1319.9	1308.7	1268.6	1166.0	1137.1
35°	1246.3	1237.4	1177.2	1088.0	1061.3
37.5°	1172.7	1161.6	1085.8	1014.4	981.0
40°	1099.2	1085.8	1003.3	938.6	903.0
42.5°	1030.0	1012.2	931.9	862.8	822.7
45°	956.5	936.4	856.1	784.8	753.6
47.5°	882.9	865.1	791.5	717.9	682.2
50°	804.9	789.3	722.4	648.8	610.9
52.5°	740.2	715.7	651.0	577.4	546.2
55°	664.4	644.3	584.1	515.0	488.3
57.5°	595.3	575.2	519.5	454.8	432.5
60°	530.6	501.6	454.8	399.1	381.2
62.5°	459.3	437.0	396.9	350.0	372.3
65°	394.6	372.3	336.7	343.3	285.4
67.5°	323.3	312.1	280.9	249.7	240.8
70°	263.1	249.7	238.6	205.1	196.2
72.5°	209.6	196.2	180.6	162.8	156.1
75°	158.3	147.1	138.2	131.5	144.9
77.5°	109.2	104.8	98.1	91.4	89.2
80°	71.3	69.1	66.9	64.7	62.4
82.5°	42.4	42.4	42.4	42.4	42.4
85°	22.3	24.5	26.8	29.0	31.2
87.5°	13.4	13.4	15.6	17.8	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)