

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: P562060

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562060
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-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 3825.0 lumens
Efficiency: N/A
Efficacy: 88.5 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

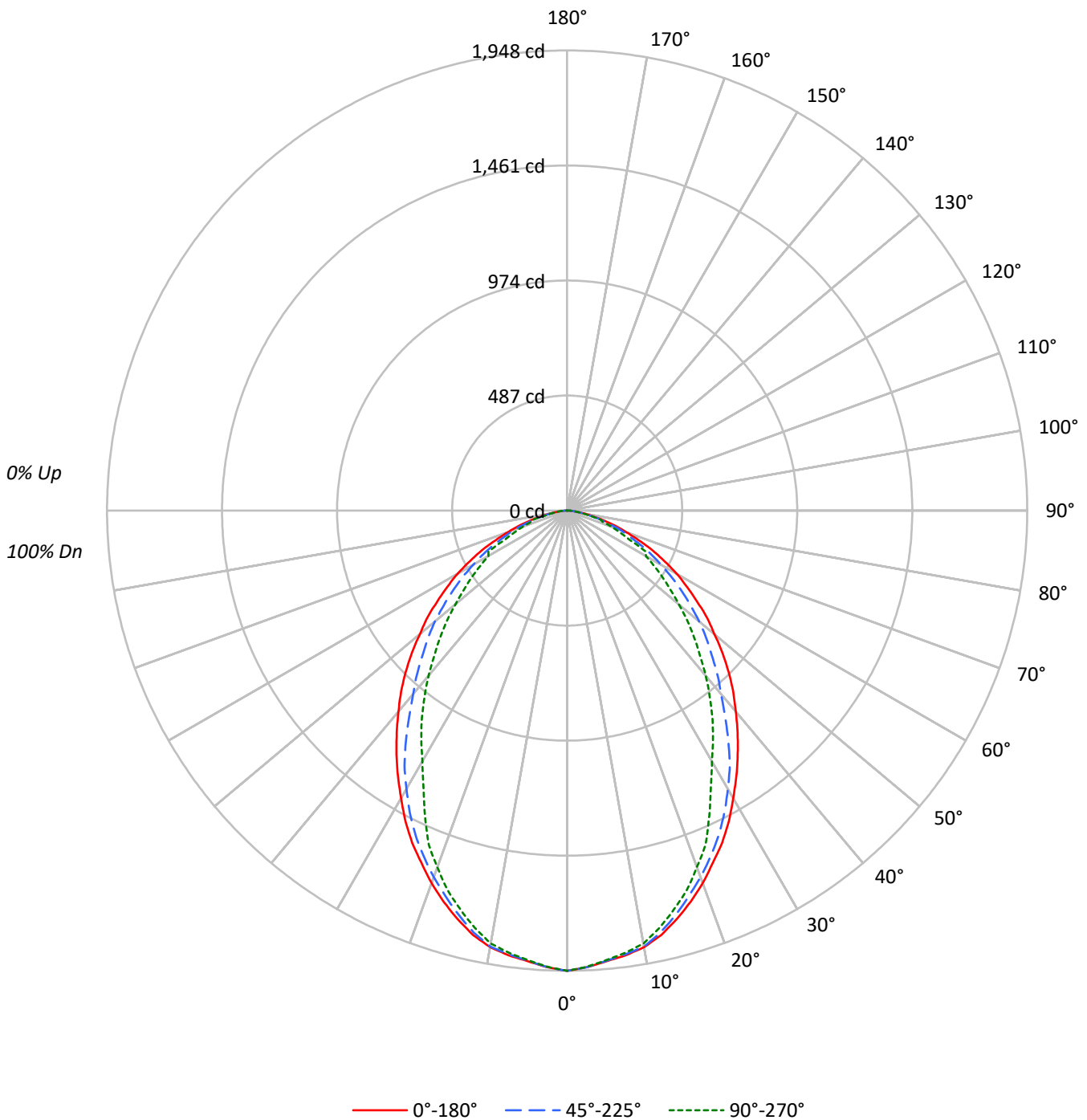
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2622	2622	2622
5°	2586	2583	2580
10°	2563	2560	2542
15°	2494	2469	2435
20°	2403	2364	2300
25°	2304	2254	2113
30°	2184	2114	1904
35°	2068	1953	1761
40°	1950	1780	1602
45°	1839	1646	1449
50°	1702	1528	1292
55°	1574	1384	1157
60°	1443	1237	1037
65°	1269	1083	918
70°	1046	948	780
75°	831	726	761
80°	559	524	489
85°	347	417	486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1839 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.4	4.7
10°-20°	497.8	13.0
20°-30°	689.1	18.0
30°-40°	734.8	19.2
40°-50°	670.3	17.5
50°-60°	525.2	13.7
60°-70°	342.3	8.9
70°-80°	151.7	4.0
80°-90°	32.6	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°	1368.2	35.8
0°-40°	2103.0	55.0
0°-60°	3298.5	86.2
0°-90°	3825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3825.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1948	1948	1948	1948	1948	
5°	1915	1912	1912	1910	1910	182
15°	1791	1791	1773	1755	1748	503
25°	1552	1543	1518	1464	1424	713
35°	1259	1250	1189	1099	1072	787
45°	966	946	865	793	761	744
55°	671	651	590	520	493	602
65°	399	376	340	347	288	393
75°	160	149	140	133	146	171
85°	22	25	27	29	32	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1948.4	1948.4	1948.4	1948.4	1948.4
2.5°	1934.9	1934.9	1934.9	1932.6	1932.6
5°	1914.6	1912.4	1912.4	1910.1	1910.1
7.5°	1898.8	1896.6	1894.3	1892.1	1887.6
10°	1876.3	1876.3	1874.1	1862.8	1860.6
12.5°	1840.3	1838.0	1829.0	1813.3	1808.7
15°	1790.7	1790.7	1772.7	1754.7	1747.9
17.5°	1736.7	1734.4	1711.9	1693.9	1684.9
20°	1678.1	1673.6	1651.1	1621.8	1606.0
22.5°	1612.8	1612.8	1585.8	1547.5	1531.7
25°	1552.0	1543.0	1518.2	1464.1	1423.6
27.5°	1482.1	1468.6	1441.6	1365.0	1317.7
30°	1405.6	1398.8	1360.5	1261.4	1225.4
32.5°	1333.5	1322.2	1281.7	1178.1	1148.8
35°	1259.1	1250.1	1189.3	1099.2	1072.2
37.5°	1184.8	1173.5	1097.0	1024.9	991.1
40°	1110.5	1097.0	1013.6	948.3	912.3
42.5°	1040.7	1022.6	941.5	871.7	831.2
45°	966.3	946.0	865.0	792.9	761.3
47.5°	892.0	874.0	799.6	725.3	689.3
50°	813.1	797.4	729.8	655.5	617.2
52.5°	747.8	723.0	657.7	583.4	551.9
55°	671.2	651.0	590.2	520.3	493.3
57.5°	601.4	581.1	524.8	459.5	437.0
60°	536.1	506.8	459.5	403.2	385.2
62.5°	464.0	441.5	400.9	353.6	376.2
65°	398.7	376.2	340.1	346.9	288.3
67.5°	326.6	315.3	283.8	252.3	243.3
70°	265.8	252.3	241.0	207.2	198.2
72.5°	211.7	198.2	182.5	164.4	157.7
75°	159.9	148.7	139.7	132.9	146.4
77.5°	110.4	105.9	99.1	92.4	90.1
80°	72.1	69.8	67.6	65.3	63.1
82.5°	42.8	42.8	42.8	42.8	42.8
85°	22.5	24.8	27.0	29.3	31.5
87.5°	13.5	13.5	15.8	18.0	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)