

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: P562122

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562122
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-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4073.0 lumens
Efficiency: N/A
Efficacy: 94.3 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

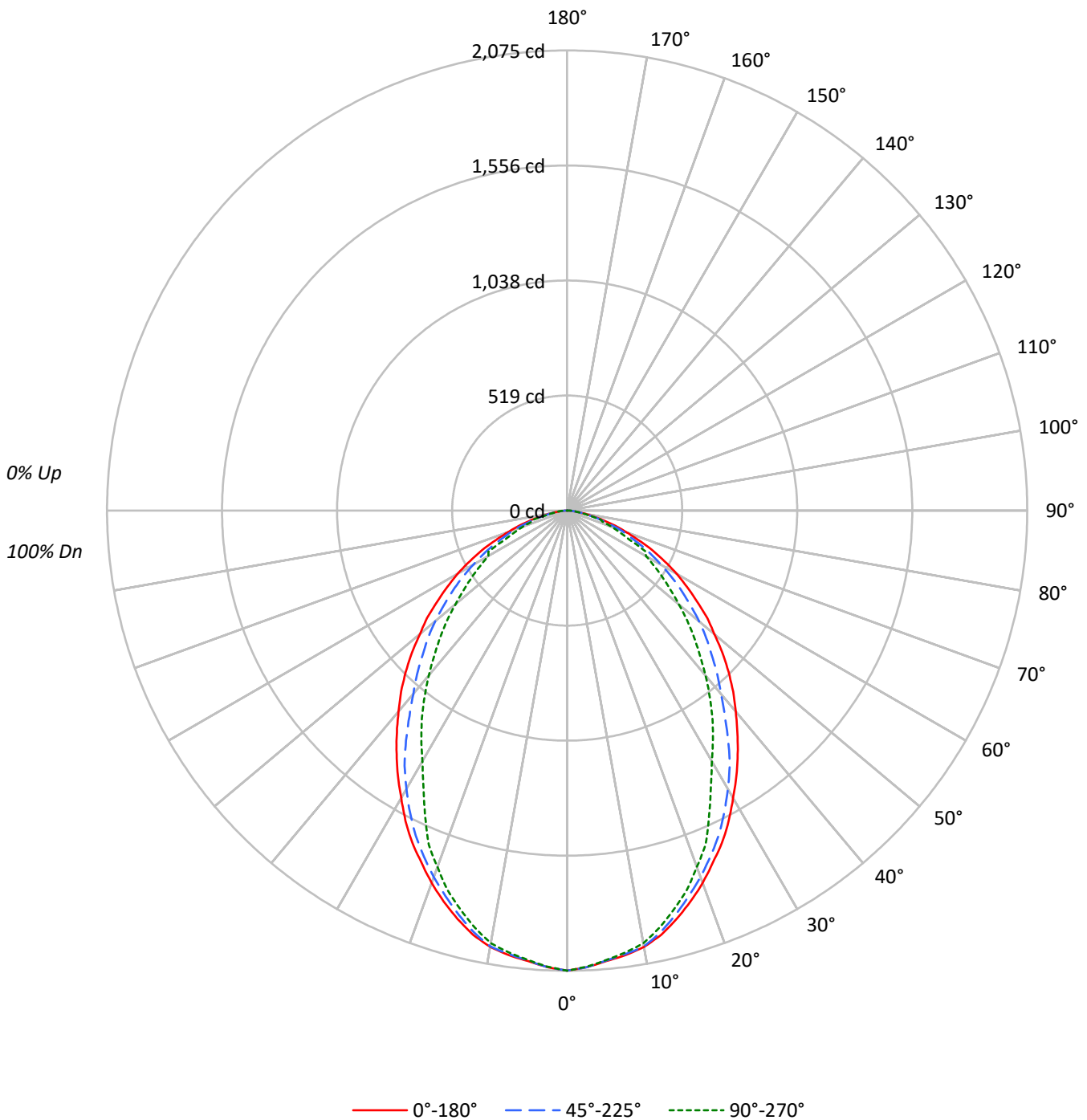
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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°	2791	2791	2791
5°	2754	2750	2747
10°	2730	2726	2707
15°	2656	2629	2593
20°	2559	2517	2449
25°	2453	2400	2250
30°	2325	2251	2027
35°	2202	2080	1875
40°	2077	1896	1706
45°	1958	1752	1543
50°	1813	1627	1376
55°	1677	1474	1232
60°	1536	1317	1104
65°	1351	1153	977
70°	1113	1009	830
75°	885	773	810
80°	595	558	521
85°	371	445	519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1958 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.1	4.7
10°-20°	530.0	13.0
20°-30°	733.8	18.0
30°-40°	782.4	19.2
40°-50°	713.8	17.5
50°-60°	559.2	13.7
60°-70°	364.5	8.9
70°-80°	161.5	4.0
80°-90°	34.7	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°	1456.9	35.8
0°-40°	2239.4	55.0
0°-60°	3512.4	86.2
0°-90°	4073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2075	2075	2075	2075	2075	
5°	2039	2036	2036	2034	2034	194
15°	1907	1907	1888	1868	1861	536
25°	1653	1643	1617	1559	1516	759
35°	1341	1331	1266	1170	1142	838
45°	1029	1007	921	844	811	793
55°	715	693	628	554	525	641
65°	424	401	362	369	307	418
75°	170	158	149	142	156	183
85°	24	26	29	31	34	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2074.7	2074.7	2074.7	2074.7	2074.7
2.5°	2060.3	2060.3	2060.3	2057.9	2057.9
5°	2038.8	2036.4	2036.4	2034.0	2034.0
7.5°	2022.0	2019.6	2017.2	2014.8	2010.0
10°	1998.0	1998.0	1995.6	1983.6	1981.2
12.5°	1959.6	1957.2	1947.6	1930.8	1926.0
15°	1906.8	1906.8	1887.6	1868.5	1861.3
17.5°	1849.3	1846.9	1822.9	1803.7	1794.1
20°	1786.9	1782.1	1758.1	1726.9	1710.2
22.5°	1717.4	1717.4	1688.6	1647.8	1631.0
25°	1652.6	1643.0	1616.6	1559.0	1515.9
27.5°	1578.2	1563.8	1535.1	1453.5	1403.1
30°	1496.7	1489.5	1448.7	1343.2	1304.8
32.5°	1419.9	1407.9	1364.8	1254.4	1223.3
35°	1340.8	1331.2	1266.4	1170.5	1141.7
37.5°	1261.6	1249.6	1168.1	1091.3	1055.4
40°	1182.5	1168.1	1079.3	1009.8	971.4
42.5°	1108.1	1088.9	1002.6	928.2	885.1
45°	1029.0	1007.4	921.0	844.3	810.7
47.5°	949.8	930.6	851.5	772.3	734.0
50°	865.9	849.1	777.1	698.0	657.2
52.5°	796.3	769.9	700.4	621.2	587.6
55°	714.8	693.2	628.4	554.1	525.3
57.5°	640.4	618.8	558.9	489.3	465.3
60°	570.9	539.7	489.3	429.3	410.1
62.5°	494.1	470.1	426.9	376.6	400.6
65°	424.5	400.6	362.2	369.4	307.0
67.5°	347.8	335.8	302.2	268.6	259.0
70°	283.0	268.6	256.6	220.7	211.1
72.5°	225.5	211.1	194.3	175.1	167.9
75°	170.3	158.3	148.7	141.5	155.9
77.5°	117.5	112.7	105.5	98.3	95.9
80°	76.8	74.4	72.0	69.6	67.2
82.5°	45.6	45.6	45.6	45.6	45.6
85°	24.0	26.4	28.8	31.2	33.6
87.5°	14.4	14.4	16.8	19.2	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)