

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: P562153

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562153
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-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4160.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

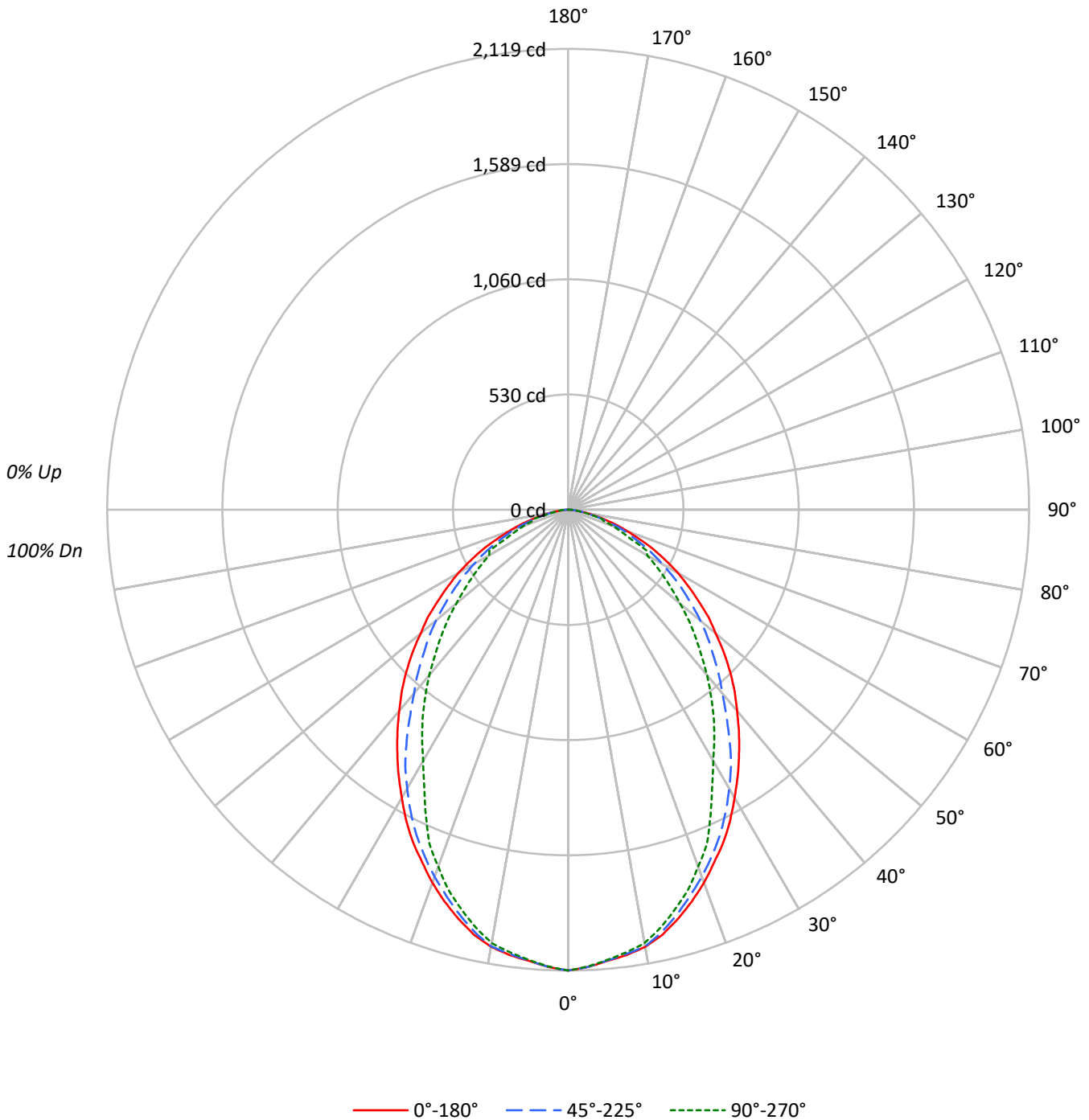
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	2851	2851	2851
5°	2812	2809	2806
10°	2788	2785	2765
15°	2713	2686	2648
20°	2613	2571	2501
25°	2506	2451	2299
30°	2375	2299	2071
35°	2249	2125	1915
40°	2121	1936	1743
45°	2000	1790	1576
50°	1851	1661	1405
55°	1712	1506	1259
60°	1569	1345	1127
65°	1380	1178	998
70°	1137	1031	848
75°	904	790	828
80°	607	570	532
85°	378	454	530

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2000 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.3	4.7
10°-20°	541.4	13.0
20°-30°	749.5	18.0
30°-40°	799.1	19.2
40°-50°	729.1	17.5
50°-60°	571.2	13.7
60°-70°	372.3	8.9
70°-80°	164.9	4.0
80°-90°	35.4	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°	1488.1	35.8
0°-40°	2287.2	55.0
0°-60°	3587.4	86.2
0°-90°	4160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2119	2119	2119	2119	2119	
5°	2082	2080	2080	2077	2077	198
15°	1948	1948	1928	1908	1901	548
25°	1688	1678	1651	1592	1548	775
35°	1369	1360	1294	1196	1166	856
45°	1051	1029	941	862	828	810
55°	730	708	642	566	536	655
65°	434	409	370	377	314	427
75°	174	162	152	144	159	186
85°	24	27	29	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2119.0	2119.0	2119.0	2119.0	2119.0
2.5°	2104.3	2104.3	2104.3	2101.9	2101.9
5°	2082.3	2079.9	2079.9	2077.4	2077.4
7.5°	2065.2	2062.7	2060.3	2057.8	2052.9
10°	2040.7	2040.7	2038.2	2026.0	2023.5
12.5°	2001.5	1999.0	1989.2	1972.1	1967.2
15°	1947.6	1947.6	1928.0	1908.4	1901.0
17.5°	1888.8	1886.3	1861.8	1842.2	1832.4
20°	1825.1	1820.2	1795.7	1763.8	1746.7
22.5°	1754.0	1754.0	1724.6	1683.0	1665.8
25°	1687.9	1678.1	1651.1	1592.3	1548.3
27.5°	1611.9	1597.2	1567.9	1484.6	1433.1
30°	1528.7	1521.3	1479.7	1371.9	1332.7
32.5°	1450.3	1438.0	1393.9	1281.2	1249.4
35°	1369.4	1359.6	1293.5	1195.5	1166.1
37.5°	1288.6	1276.3	1193.0	1114.6	1077.9
40°	1207.7	1193.0	1102.4	1031.4	992.2
42.5°	1131.8	1112.2	1024.0	948.1	904.0
45°	1051.0	1028.9	940.7	862.3	828.0
47.5°	970.1	950.5	869.7	788.8	749.6
50°	884.4	867.2	793.7	712.9	671.2
52.5°	813.3	786.4	715.3	634.5	600.2
55°	730.0	708.0	641.8	565.9	536.5
57.5°	654.1	632.0	570.8	499.8	475.3
60°	583.0	551.2	499.8	438.5	418.9
62.5°	504.7	480.2	436.1	384.6	409.1
65°	433.6	409.1	369.9	377.3	313.6
67.5°	355.2	343.0	308.7	274.4	264.6
70°	289.1	274.4	262.1	225.4	215.6
72.5°	230.3	215.6	198.4	178.8	171.5
75°	173.9	161.7	151.9	144.5	159.2
77.5°	120.0	115.1	107.8	100.4	98.0
80°	78.4	75.9	73.5	71.0	68.6
82.5°	46.5	46.5	46.5	46.5	46.5
85°	24.5	26.9	29.4	31.8	34.3
87.5°	14.7	14.7	17.1	19.6	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)