

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: P562061

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562061
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
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4552.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

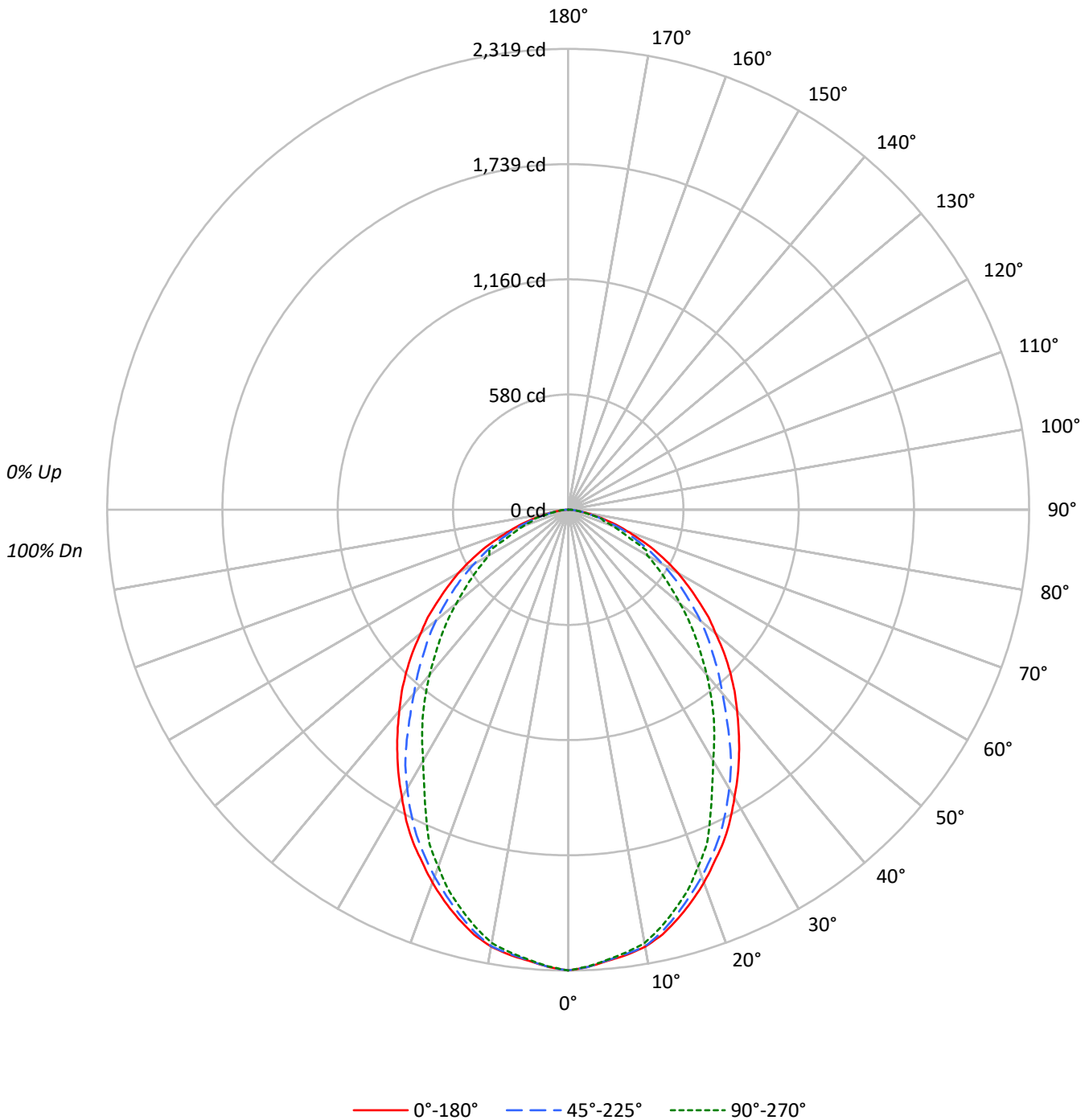
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3120	3120	3120
5°	3077	3074	3070
10°	3051	3047	3025
15°	2969	2939	2898
20°	2860	2813	2737
25°	2742	2682	2515
30°	2599	2515	2266
35°	2461	2325	2096
40°	2321	2119	1907
45°	2188	1959	1724
50°	2026	1818	1537
55°	1874	1647	1377
60°	1717	1471	1234
65°	1511	1289	1092
70°	1244	1128	928
75°	989	864	906
80°	665	623	582
85°	414	497	579

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2188 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.8	4.7
10°-20°	592.4	13.0
20°-30°	820.1	18.0
30°-40°	874.5	19.2
40°-50°	797.8	17.5
50°-60°	625.0	13.7
60°-70°	407.3	8.9
70°-80°	180.5	4.0
80°-90°	38.7	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°	1628.3	35.8
0°-40°	2502.7	55.0
0°-60°	3925.5	86.2
0°-90°	4552.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4552.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2319	2319	2319	2319	2319	
5°	2278	2276	2276	2273	2273	216
15°	2131	2131	2110	2088	2080	599
25°	1847	1836	1807	1742	1694	848
35°	1498	1488	1415	1308	1276	937
45°	1150	1126	1029	944	906	886
55°	799	775	702	619	587	716
65°	474	448	405	413	343	468
75°	190	177	166	158	174	204
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2318.7	2318.7	2318.7	2318.7	2318.7
2.5°	2302.6	2302.6	2302.6	2300.0	2300.0
5°	2278.5	2275.8	2275.8	2273.2	2273.2
7.5°	2259.8	2257.1	2254.4	2251.7	2246.4
10°	2232.9	2232.9	2230.3	2216.9	2214.2
12.5°	2190.1	2187.4	2176.7	2157.9	2152.5
15°	2131.1	2131.1	2109.6	2088.2	2080.2
17.5°	2066.8	2064.1	2037.3	2015.8	2005.1
20°	1997.1	1991.7	1964.9	1930.0	1911.3
22.5°	1919.3	1919.3	1887.1	1841.6	1822.8
25°	1846.9	1836.2	1806.7	1742.4	1694.1
27.5°	1763.8	1747.8	1715.6	1624.4	1568.2
30°	1672.7	1664.7	1619.1	1501.1	1458.3
32.5°	1586.9	1573.5	1525.3	1402.0	1367.1
35°	1498.5	1487.7	1415.4	1308.1	1276.0
37.5°	1410.0	1396.6	1305.5	1219.7	1179.5
40°	1321.5	1305.5	1206.3	1128.5	1085.6
42.5°	1238.4	1217.0	1120.5	1037.4	989.1
45°	1150.0	1125.9	1029.4	943.6	906.0
47.5°	1061.5	1040.1	951.6	863.2	820.3
50°	967.7	948.9	868.5	780.1	734.5
52.5°	890.0	860.5	782.7	694.3	656.7
55°	798.8	774.7	702.3	619.2	587.1
57.5°	715.7	691.6	624.6	546.8	520.0
60°	638.0	603.1	546.8	479.8	458.4
62.5°	552.2	525.4	477.1	420.9	447.7
65°	474.5	447.7	404.8	412.8	343.1
67.5°	388.7	375.3	337.8	300.2	289.5
70°	316.3	300.2	286.8	246.6	235.9
72.5°	252.0	235.9	217.1	195.7	187.6
75°	190.3	176.9	166.2	158.2	174.2
77.5°	131.3	126.0	117.9	109.9	107.2
80°	85.8	83.1	80.4	77.7	75.1
82.5°	50.9	50.9	50.9	50.9	50.9
85°	26.8	29.5	32.2	34.8	37.5
87.5°	16.1	16.1	18.8	21.4	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)