

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: P562762

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562762
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-LD4-2LO-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4709.0 lumens
Efficiency: N/A
Efficacy: 100.6 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

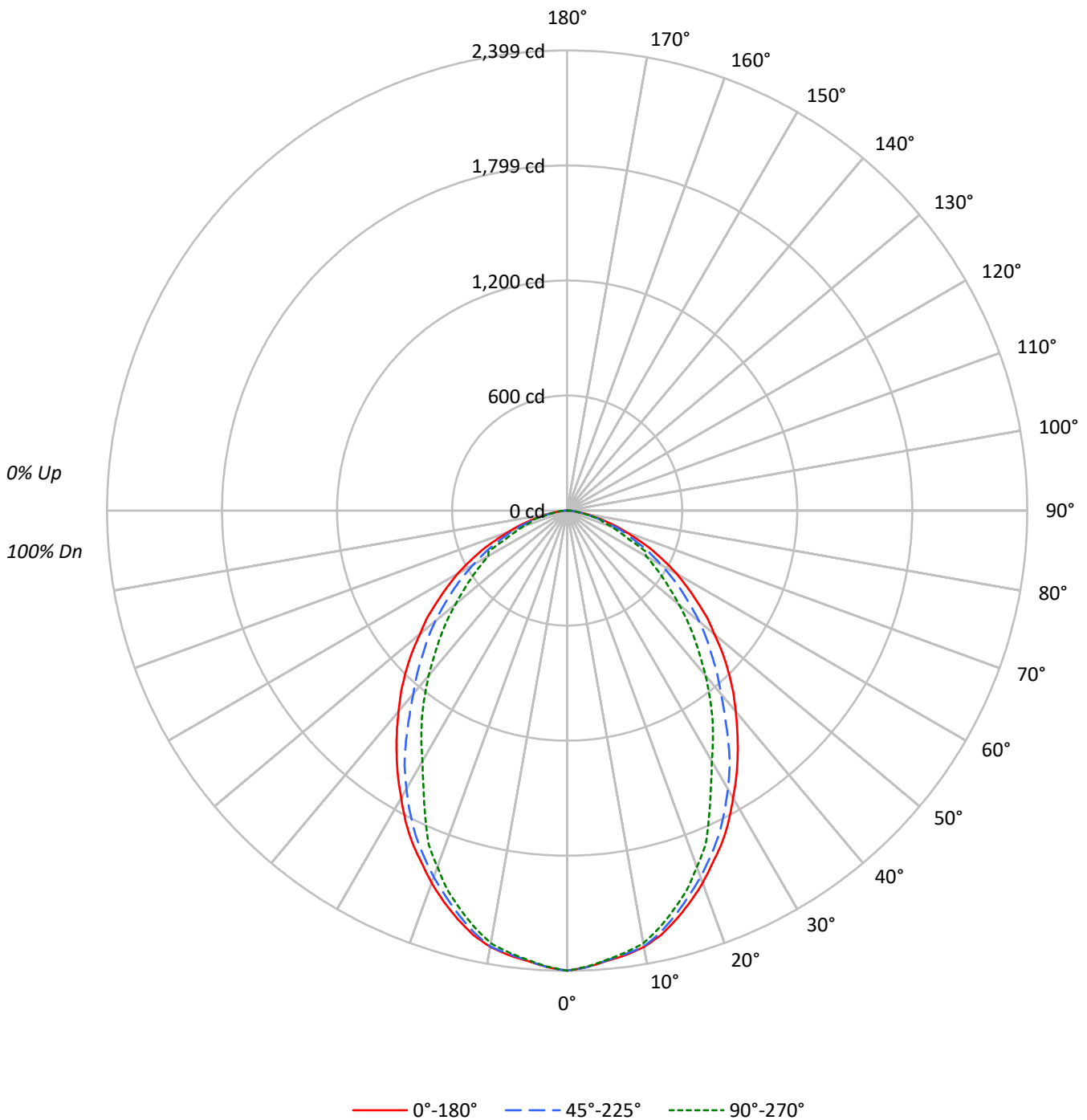
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3227	3227	3227
5°	3184	3180	3176
10°	3156	3152	3130
15°	3071	3040	2997
20°	2958	2911	2831
25°	2836	2775	2602
30°	2688	2602	2344
35°	2546	2405	2168
40°	2401	2192	1973
45°	2264	2026	1784
50°	2096	1881	1590
55°	1939	1704	1425
60°	1776	1522	1276
65°	1563	1333	1130
70°	1287	1167	960
75°	1024	894	937
80°	687	645	601
85°	428	514	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2264 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.3	4.7
10°-20°	612.8	13.0
20°-30°	848.4	18.0
30°-40°	904.6	19.2
40°-50°	825.3	17.5
50°-60°	646.5	13.7
60°-70°	421.4	8.9
70°-80°	186.7	4.0
80°-90°	40.1	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°	1684.4	35.8
0°-40°	2589.1	55.0
0°-60°	4060.9	86.2
0°-90°	4709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4709.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2399	2399	2399	2399	2399	
5°	2357	2354	2354	2352	2352	224
15°	2205	2205	2182	2160	2152	620
25°	1911	1900	1869	1802	1753	877
35°	1550	1539	1464	1353	1320	969
45°	1190	1165	1065	976	937	916
55°	826	801	726	641	607	741
65°	491	463	419	427	355	484
75°	197	183	172	164	180	211
85°	28	30	33	36	39	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2398.7	2398.7	2398.7	2398.7	2398.7
2.5°	2382.1	2382.1	2382.1	2379.3	2379.3
5°	2357.1	2354.3	2354.3	2351.6	2351.6
7.5°	2337.7	2334.9	2332.1	2329.4	2323.8
10°	2310.0	2310.0	2307.2	2293.3	2290.6
12.5°	2265.6	2262.8	2251.7	2232.3	2226.8
15°	2204.6	2204.6	2182.4	2160.2	2151.9
17.5°	2138.0	2135.3	2107.5	2085.3	2074.3
20°	2065.9	2060.4	2032.7	1996.6	1977.2
22.5°	1985.5	1985.5	1952.2	1905.1	1885.7
25°	1910.6	1899.5	1869.0	1802.5	1752.6
27.5°	1824.7	1808.0	1774.8	1680.5	1622.2
30°	1730.4	1722.1	1674.9	1552.9	1508.5
32.5°	1641.7	1627.8	1577.9	1450.3	1414.3
35°	1550.1	1539.1	1464.2	1353.3	1320.0
37.5°	1458.6	1444.8	1350.5	1261.7	1220.1
40°	1367.1	1350.5	1247.9	1167.5	1123.1
42.5°	1281.2	1259.0	1159.1	1073.2	1023.3
45°	1189.6	1164.7	1064.9	976.1	937.3
47.5°	1098.1	1075.9	984.4	892.9	848.6
50°	1001.1	981.7	898.5	807.0	759.8
52.5°	920.7	890.2	809.7	718.2	679.4
55°	826.4	801.4	726.5	640.6	607.3
57.5°	740.4	715.5	646.1	565.7	538.0
60°	660.0	623.9	565.7	496.4	474.2
62.5°	571.3	543.5	493.6	435.4	463.1
65°	490.8	463.1	418.7	427.1	355.0
67.5°	402.1	388.2	349.4	310.6	299.5
70°	327.2	310.6	296.7	255.1	244.0
72.5°	260.7	244.0	224.6	202.4	194.1
75°	196.9	183.0	171.9	163.6	180.2
77.5°	135.9	130.3	122.0	113.7	110.9
80°	88.7	86.0	83.2	80.4	77.6
82.5°	52.7	52.7	52.7	52.7	52.7
85°	27.7	30.5	33.3	36.0	38.8
87.5°	16.6	16.6	19.4	22.2	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)