

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: P562704

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562704
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-35-UNV-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4535.0 lumens
Efficiency: N/A
Efficacy: 96.9 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

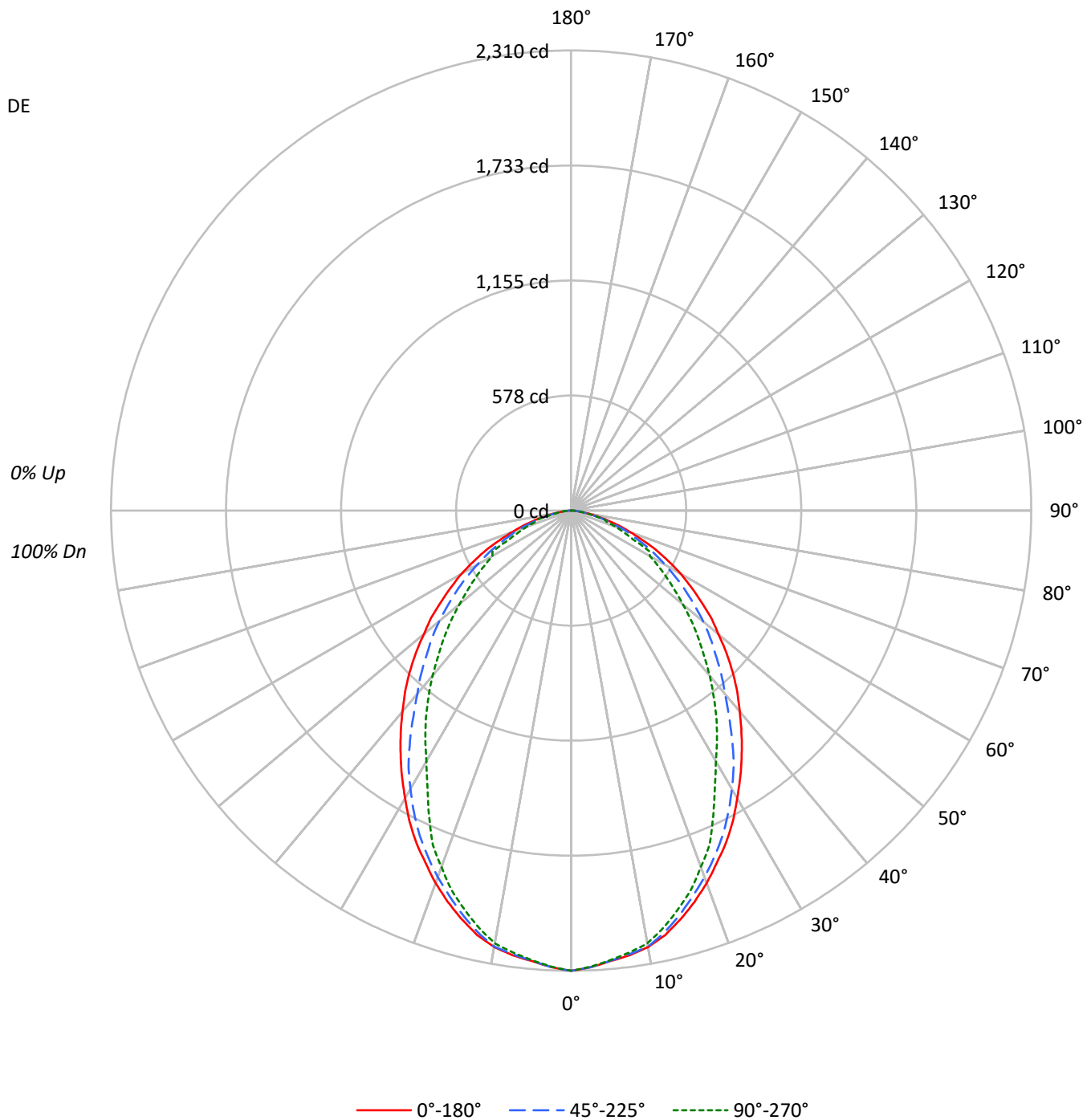
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3108	3108	3108
5°	3066	3062	3059
10°	3039	3036	3014
15°	2957	2928	2887
20°	2849	2803	2726
25°	2732	2672	2506
30°	2589	2506	2257
35°	2452	2316	2088
40°	2312	2111	1900
45°	2180	1951	1718
50°	2018	1811	1532
55°	1867	1641	1372
60°	1710	1466	1229
65°	1505	1284	1088
70°	1240	1124	924
75°	986	861	902
80°	662	621	580
85°	412	494	577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2180 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.0	4.7
10°-20°	590.1	13.0
20°-30°	817.0	18.0
30°-40°	871.2	19.2
40°-50°	794.8	17.5
50°-60°	622.6	13.7
60°-70°	405.8	8.9
70°-80°	179.8	4.0
80°-90°	38.6	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°	1622.2	35.8
0°-40°	2493.4	55.0
0°-60°	3910.8	86.2
0°-90°	4535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4535.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2310	2310	2310	2310	2310	
5°	2270	2267	2267	2265	2265	215
15°	2123	2123	2102	2080	2072	597
25°	1840	1829	1800	1736	1688	845
35°	1493	1482	1410	1303	1271	933
45°	1146	1122	1026	940	903	883
55°	796	772	700	617	585	714
65°	473	446	403	411	342	466
75°	190	176	166	158	174	203
85°	27	29	32	35	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2310.1	2310.1	2310.1	2310.1	2310.1
2.5°	2294.0	2294.0	2294.0	2291.4	2291.4
5°	2270.0	2267.3	2267.3	2264.7	2264.7
7.5°	2251.3	2248.6	2246.0	2243.3	2238.0
10°	2224.6	2224.6	2221.9	2208.6	2205.9
12.5°	2181.9	2179.2	2168.5	2149.8	2144.5
15°	2123.1	2123.1	2101.8	2080.4	2072.4
17.5°	2059.0	2056.4	2029.7	2008.3	1997.6
20°	1989.6	1984.3	1957.5	1922.8	1904.1
22.5°	1912.1	1912.1	1880.1	1834.7	1816.0
25°	1840.0	1829.4	1800.0	1735.9	1687.8
27.5°	1757.3	1741.2	1709.2	1618.4	1562.3
30°	1666.5	1658.4	1613.0	1495.5	1452.8
32.5°	1581.0	1567.6	1519.6	1396.7	1362.0
35°	1492.9	1482.2	1410.1	1303.3	1271.2
37.5°	1404.7	1391.4	1300.6	1215.1	1175.1
40°	1316.6	1300.6	1201.8	1124.3	1081.6
42.5°	1233.8	1212.5	1116.3	1033.5	985.5
45°	1145.7	1121.7	1025.5	940.1	902.7
47.5°	1057.6	1036.2	948.1	859.9	817.2
50°	964.1	945.4	865.3	777.1	731.7
52.5°	886.6	857.3	779.8	691.7	654.3
55°	795.8	771.8	699.7	616.9	584.9
57.5°	713.1	689.0	622.2	544.8	518.1
60°	635.6	600.9	544.8	478.0	456.7
62.5°	550.1	523.4	475.4	419.3	446.0
65°	472.7	446.0	403.3	411.3	341.8
67.5°	387.2	373.9	336.5	299.1	288.4
70°	315.1	299.1	285.8	245.7	235.0
72.5°	251.0	235.0	216.3	195.0	186.9
75°	189.6	176.3	165.6	157.6	173.6
77.5°	130.9	125.5	117.5	109.5	106.8
80°	85.5	82.8	80.1	77.4	74.8
82.5°	50.7	50.7	50.7	50.7	50.7
85°	26.7	29.4	32.0	34.7	37.4
87.5°	16.0	16.0	18.7	21.4	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)