

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: P562809

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562809
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-50-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5055.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

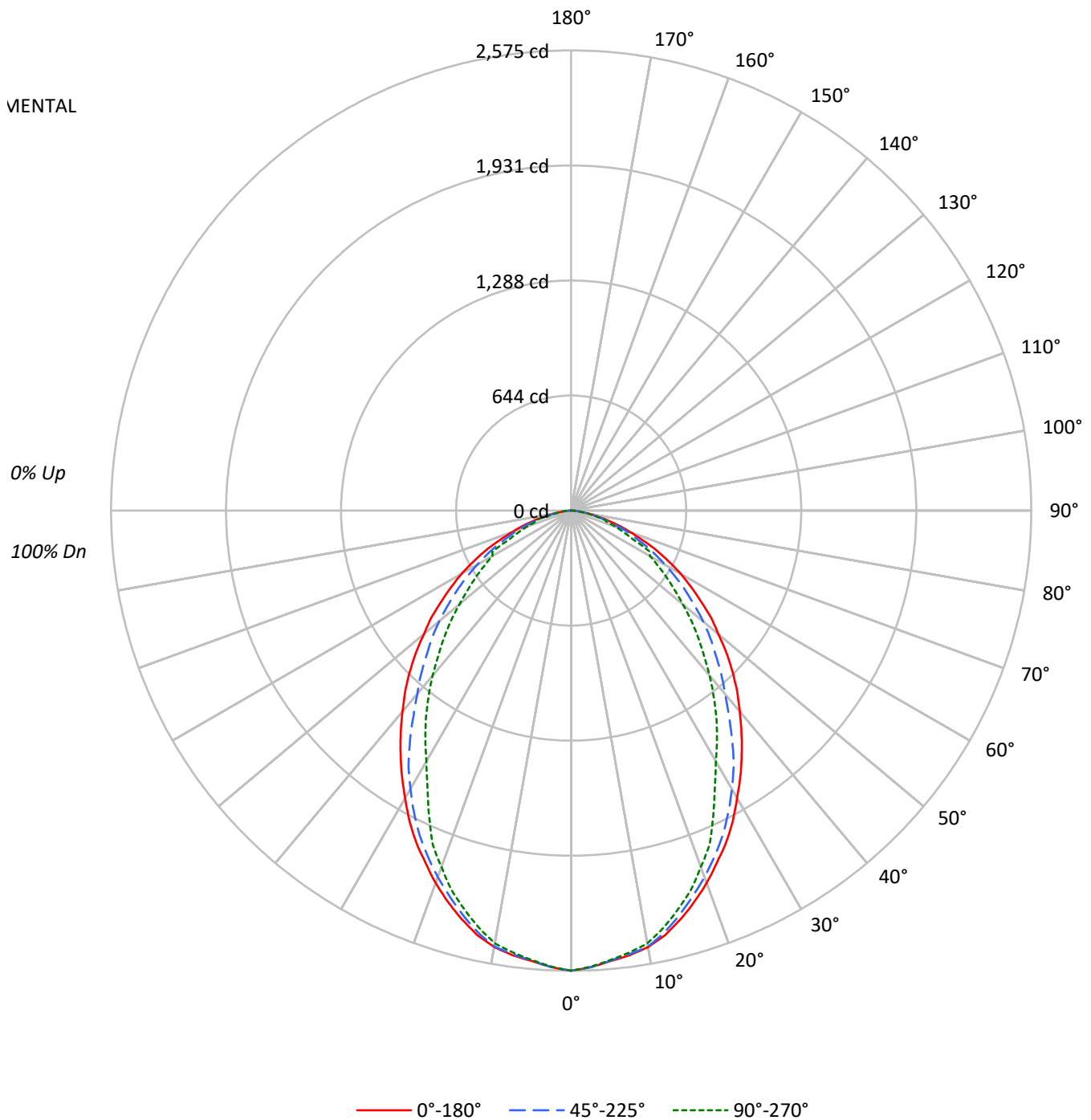
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3465	3465	3465
5°	3417	3413	3409
10°	3388	3384	3359
15°	3297	3263	3218
20°	3175	3124	3039
25°	3045	2979	2793
30°	2886	2793	2516
35°	2733	2582	2327
40°	2578	2353	2118
45°	2430	2175	1915
50°	2249	2019	1707
55°	2081	1829	1529
60°	1907	1634	1370
65°	1677	1431	1213
70°	1382	1253	1031
75°	1099	960	1006
80°	738	692	646
85°	460	551	644

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2430 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.7	4.7
10°-20°	657.8	13.0
20°-30°	910.7	18.0
30°-40°	971.1	19.2
40°-50°	885.9	17.5
50°-60°	694.0	13.7
60°-70°	452.3	8.9
70°-80°	200.4	4.0
80°-90°	43.0	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°	1808.2	35.8
0°-40°	2779.3	55.0
0°-60°	4359.2	86.2
0°-90°	5055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2575	2575	2575	2575	2575	
5°	2530	2527	2527	2524	2524	240
15°	2367	2367	2343	2319	2310	665
25°	2051	2039	2006	1935	1881	942
35°	1664	1652	1572	1453	1417	1040
45°	1277	1250	1143	1048	1006	984
55°	887	860	780	688	652	796
65°	527	497	450	458	381	519
75°	211	196	185	176	194	227
85°	30	33	36	39	42	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2574.9	2574.9	2574.9	2574.9	2574.9
2.5°	2557.1	2557.1	2557.1	2554.1	2554.1
5°	2530.3	2527.3	2527.3	2524.3	2524.3
7.5°	2509.5	2506.5	2503.5	2500.5	2494.6
10°	2479.7	2479.7	2476.7	2461.8	2458.9
12.5°	2432.1	2429.1	2417.2	2396.3	2390.4
15°	2366.6	2366.6	2342.8	2318.9	2310.0
17.5°	2295.1	2292.2	2262.4	2238.6	2226.7
20°	2217.7	2211.8	2182.0	2143.3	2122.5
22.5°	2131.4	2131.4	2095.7	2045.1	2024.2
25°	2051.0	2039.1	2006.4	1934.9	1881.4
27.5°	1958.7	1940.9	1905.2	1804.0	1741.4
30°	1857.5	1848.6	1798.0	1667.0	1619.4
32.5°	1762.3	1747.4	1693.8	1556.9	1518.2
35°	1664.0	1652.1	1571.8	1452.7	1417.0
37.5°	1565.8	1550.9	1449.7	1354.5	1309.8
40°	1467.6	1449.7	1339.6	1253.2	1205.6
42.5°	1375.3	1351.5	1244.3	1152.0	1098.4
45°	1277.1	1250.3	1143.1	1047.8	1006.2
47.5°	1178.8	1155.0	1056.8	958.5	910.9
50°	1074.6	1053.8	964.5	866.3	815.6
52.5°	988.3	955.6	869.2	771.0	729.3
55°	887.1	860.3	779.9	687.6	651.9
57.5°	794.8	768.0	693.6	607.3	577.5
60°	708.5	669.8	607.3	532.9	509.0
62.5°	613.2	583.5	529.9	467.4	497.1
65°	526.9	497.1	449.5	458.4	381.0
67.5°	431.6	416.8	375.1	333.4	321.5
70°	351.3	333.4	318.5	273.9	262.0
72.5°	279.8	262.0	241.1	217.3	208.4
75°	211.4	196.5	184.6	175.6	193.5
77.5°	145.9	139.9	131.0	122.0	119.1
80°	95.3	92.3	89.3	86.3	83.4
82.5°	56.6	56.6	56.6	56.6	56.6
85°	29.8	32.7	35.7	38.7	41.7
87.5°	17.9	17.9	20.8	23.8	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)