

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: P562677

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562677
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-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5648.0 lumens
Efficiency: N/A
Efficacy: 120.7 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

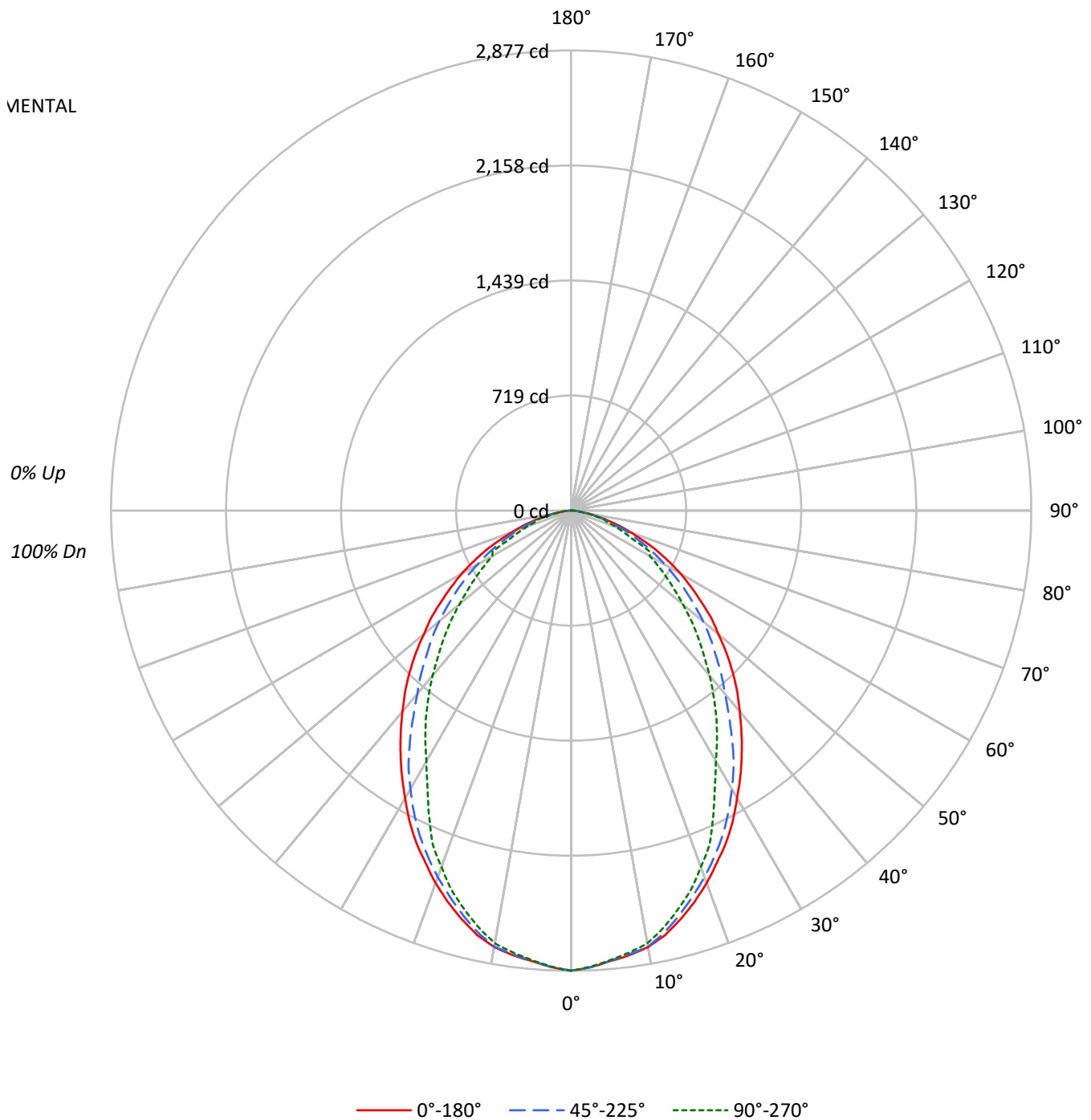
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3871	3871	3871
5°	3818	3814	3809
10°	3785	3781	3753
15°	3683	3646	3595
20°	3548	3491	3396
25°	3402	3328	3121
30°	3224	3121	2811
35°	3054	2884	2600
40°	2880	2629	2366
45°	2715	2430	2139
50°	2513	2256	1908
55°	2325	2044	1709
60°	2130	1826	1531
65°	1874	1599	1355
70°	1544	1400	1151
75°	1227	1072	1124
80°	824	773	721
85°	514	616	719

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2715 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.8	4.7
10°-20°	735.0	13.0
20°-30°	1017.5	18.0
30°-40°	1085.0	19.2
40°-50°	989.8	17.5
50°-60°	775.4	13.7
60°-70°	505.4	8.9
70°-80°	223.9	4.0
80°-90°	48.1	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°	2020.3	35.8
0°-40°	3105.3	55.0
0°-60°	4870.6	86.2
0°-90°	5648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2877	2877	2877	2877	2877	
5°	2827	2824	2824	2820	2820	268
15°	2644	2644	2618	2591	2581	743
25°	2292	2278	2242	2162	2102	1052
35°	1859	1846	1756	1623	1583	1162
45°	1427	1397	1277	1171	1124	1099
55°	991	961	871	768	728	889
65°	589	555	502	512	426	580
75°	236	220	206	196	216	253
85°	33	37	40	43	47	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2877.0	2877.0	2877.0	2877.0	2877.0
2.5°	2857.1	2857.1	2857.1	2853.7	2853.7
5°	2827.1	2823.8	2823.8	2820.5	2820.5
7.5°	2803.8	2800.5	2797.2	2793.9	2787.2
10°	2770.6	2770.6	2767.3	2750.6	2747.3
12.5°	2717.4	2714.0	2700.7	2677.5	2670.8
15°	2644.2	2644.2	2617.6	2591.0	2581.0
17.5°	2564.4	2561.0	2527.8	2501.2	2487.9
20°	2477.9	2471.2	2438.0	2394.7	2371.5
22.5°	2381.4	2381.4	2341.5	2285.0	2261.7
25°	2291.6	2278.3	2241.7	2161.9	2102.1
27.5°	2188.5	2168.6	2128.7	2015.6	1945.7
30°	2075.4	2065.5	2008.9	1862.6	1809.4
32.5°	1969.0	1952.4	1892.5	1739.5	1696.3
35°	1859.3	1845.9	1756.1	1623.1	1583.2
37.5°	1749.5	1732.9	1619.8	1513.3	1463.5
40°	1639.7	1619.8	1496.7	1400.3	1347.0
42.5°	1536.6	1510.0	1390.3	1287.2	1227.3
45°	1426.9	1396.9	1277.2	1170.8	1124.2
47.5°	1317.1	1290.5	1180.7	1071.0	1017.8
50°	1200.7	1177.4	1077.6	967.9	911.3
52.5°	1104.2	1067.7	971.2	861.4	814.9
55°	991.2	961.2	871.4	768.3	728.4
57.5°	888.0	858.1	775.0	678.5	645.2
60°	791.6	748.4	678.5	595.4	568.8
62.5°	685.2	651.9	592.0	522.2	555.4
65°	588.7	555.4	502.2	512.2	425.7
67.5°	482.3	465.6	419.1	372.5	359.2
70°	392.5	372.5	355.9	306.0	292.7
72.5°	312.6	292.7	269.4	242.8	232.8
75°	236.1	219.5	206.2	196.2	216.2
77.5°	163.0	156.3	146.3	136.4	133.0
80°	106.4	103.1	99.8	96.5	93.1
82.5°	63.2	63.2	63.2	63.2	63.2
85°	33.3	36.6	39.9	43.2	46.6
87.5°	20.0	20.0	23.3	26.6	29.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)