

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: P562795

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562795
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-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5912.0 lumens
Efficiency: N/A
Efficacy: 126.3 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

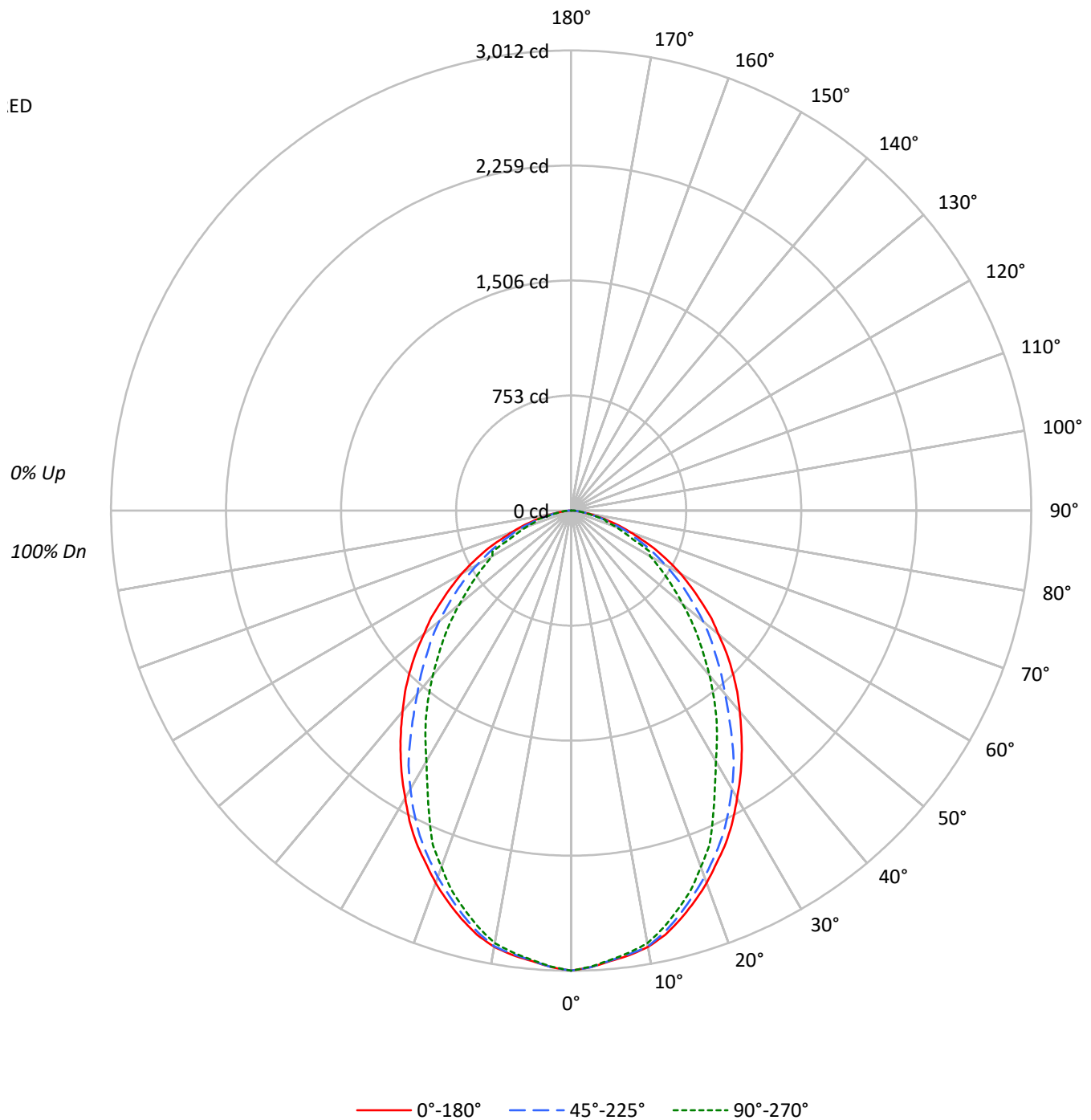
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4052	4052	4052
5°	3997	3992	3987
10°	3962	3957	3929
15°	3855	3817	3763
20°	3714	3654	3554
25°	3561	3484	3267
30°	3375	3267	2942
35°	3197	3019	2722
40°	3015	2752	2477
45°	2842	2544	2239
50°	2631	2361	1997
55°	2434	2140	1788
60°	2230	1911	1602
65°	1962	1674	1419
70°	1616	1465	1205
75°	1285	1122	1176
80°	863	809	755
85°	537	645	752

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2842 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	280.3	4.7
10°-20°	769.3	13.0
20°-30°	1065.1	18.0
30°-40°	1135.7	19.2
40°-50°	1036.1	17.5
50°-60°	811.7	13.7
60°-70°	529.0	8.9
70°-80°	234.4	4.0
80°-90°	50.3	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°	2114.8	35.8
0°-40°	3250.5	55.0
0°-60°	5098.3	86.2
0°-90°	5912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5912.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3012	3012	3012	3012	3012	
5°	2959	2956	2956	2952	2952	281
15°	2768	2768	2740	2712	2702	778
25°	2399	2385	2346	2263	2200	1101
35°	1946	1932	1838	1699	1657	1217
45°	1494	1462	1337	1226	1177	1151
55°	1038	1006	912	804	762	931
65°	616	581	526	536	446	607
75°	247	230	216	205	226	265
85°	35	38	42	45	49	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3011.5	3011.5	3011.5	3011.5	3011.5
2.5°	2990.6	2990.6	2990.6	2987.1	2987.1
5°	2959.3	2955.8	2955.8	2952.3	2952.3
7.5°	2934.9	2931.4	2927.9	2924.5	2917.5
10°	2900.1	2900.1	2896.6	2879.2	2875.7
12.5°	2844.4	2840.9	2827.0	2802.6	2795.6
15°	2767.8	2767.8	2739.9	2712.1	2701.6
17.5°	2684.2	2680.8	2645.9	2618.1	2604.2
20°	2593.7	2586.8	2551.9	2506.7	2482.3
22.5°	2492.8	2492.8	2451.0	2391.8	2367.4
25°	2398.8	2384.8	2346.5	2263.0	2200.3
27.5°	2290.8	2269.9	2228.2	2109.8	2036.7
30°	2172.5	2162.0	2102.8	1949.6	1893.9
32.5°	2061.0	2043.6	1981.0	1820.8	1775.6
35°	1946.2	1932.2	1838.2	1699.0	1657.2
37.5°	1831.3	1813.9	1695.5	1584.1	1531.9
40°	1716.4	1695.5	1566.7	1465.7	1410.0
42.5°	1608.5	1580.6	1455.3	1347.3	1284.7
45°	1493.6	1462.2	1336.9	1225.5	1176.7
47.5°	1378.7	1350.8	1235.9	1121.0	1065.3
50°	1256.8	1232.4	1128.0	1013.1	953.9
52.5°	1155.9	1117.6	1016.6	901.7	853.0
55°	1037.5	1006.2	912.2	804.2	762.4
57.5°	929.6	898.2	811.2	710.2	675.4
60°	828.6	783.3	710.2	623.2	595.3
62.5°	717.2	682.4	619.7	546.6	581.4
65°	616.2	581.4	525.7	536.2	445.6
67.5°	504.8	487.4	438.7	389.9	376.0
70°	410.8	389.9	372.5	320.3	306.4
72.5°	327.3	306.4	282.0	254.1	243.7
75°	247.2	229.8	215.9	205.4	226.3
77.5°	170.6	163.6	153.2	142.7	139.3
80°	111.4	107.9	104.4	101.0	97.5
82.5°	66.1	66.1	66.1	66.1	66.1
85°	34.8	38.3	41.8	45.3	48.7
87.5°	20.9	20.9	24.4	27.9	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)