

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: P562938

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562938
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-LD4-2STD-40-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6639.0 lumens
Efficiency: N/A
Efficacy: 99.7 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

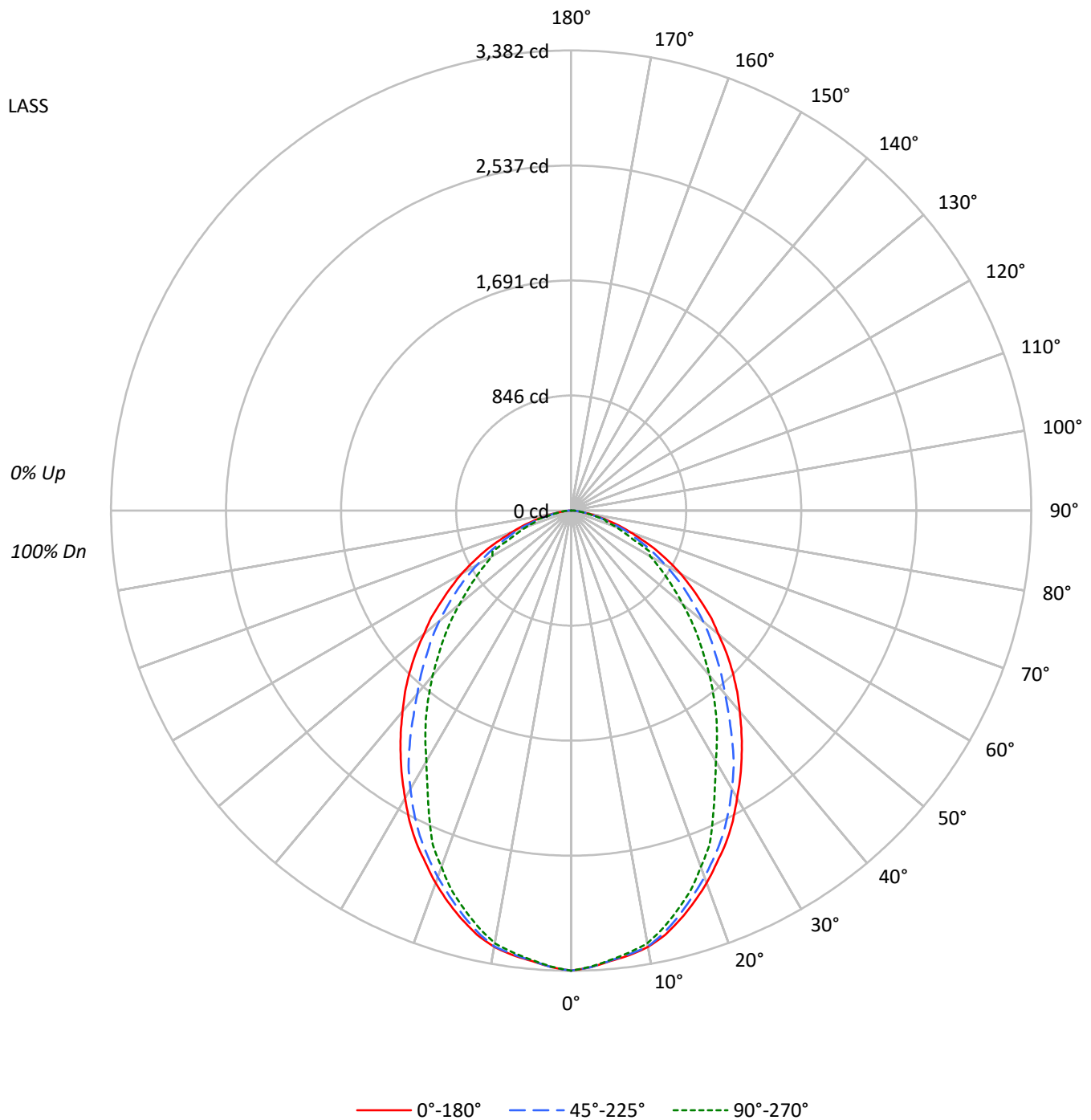
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	4550	4550	4550
5°	4488	4483	4478
10°	4449	4444	4412
15°	4329	4286	4226
20°	4171	4103	3991
25°	3999	3912	3668
30°	3790	3669	3304
35°	3590	3391	3057
40°	3385	3090	2781
45°	3191	2857	2515
50°	2954	2651	2242
55°	2733	2403	2008
60°	2504	2146	1799
65°	2203	1880	1593
70°	1815	1646	1353
75°	1443	1260	1321
80°	969	909	848
85°	604	724	844

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3191 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.8	4.7
10°-20°	863.9	13.0
20°-30°	1196.1	18.0
30°-40°	1275.4	19.2
40°-50°	1163.5	17.5
50°-60°	911.5	13.7
60°-70°	594.1	8.9
70°-80°	263.2	4.0
80°-90°	56.5	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°	2374.8	35.8
0°-40°	3650.2	55.0
0°-60°	5725.2	86.2
0°-90°	6639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3382	3382	3382	3382	3382	
5°	3323	3319	3319	3315	3315	315
15°	3108	3108	3077	3046	3034	874
25°	2694	2678	2635	2541	2471	1237
35°	2186	2170	2064	1908	1861	1366
45°	1677	1642	1501	1376	1322	1292
55°	1165	1130	1024	903	856	1045
65°	692	653	590	602	500	682
75°	278	258	242	231	254	298
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3381.8	3381.8	3381.8	3381.8	3381.8
2.5°	3358.4	3358.4	3358.4	3354.5	3354.5
5°	3323.2	3319.3	3319.3	3315.4	3315.4
7.5°	3295.8	3291.9	3288.0	3284.1	3276.3
10°	3256.7	3256.7	3252.8	3233.3	3229.3
12.5°	3194.2	3190.2	3174.6	3147.2	3139.4
15°	3108.1	3108.1	3076.9	3045.6	3033.9
17.5°	3014.3	3010.4	2971.3	2940.0	2924.4
20°	2912.7	2904.8	2865.7	2814.9	2787.6
22.5°	2799.3	2799.3	2752.4	2685.9	2658.5
25°	2693.7	2678.1	2635.1	2541.3	2470.9
27.5°	2572.5	2549.1	2502.2	2369.2	2287.1
30°	2439.6	2427.9	2361.4	2189.4	2126.8
32.5°	2314.5	2294.9	2224.6	2044.7	1993.9
35°	2185.5	2169.8	2064.3	1907.9	1861.0
37.5°	2056.5	2036.9	1904.0	1778.9	1720.2
40°	1927.4	1904.0	1759.3	1645.9	1583.4
42.5°	1806.2	1775.0	1634.2	1513.0	1442.6
45°	1677.2	1642.0	1501.3	1376.2	1321.5
47.5°	1548.2	1516.9	1387.9	1258.9	1196.3
50°	1411.4	1384.0	1266.7	1137.7	1071.2
52.5°	1298.0	1255.0	1141.6	1012.6	957.9
55°	1165.1	1129.9	1024.3	903.1	856.2
57.5°	1043.9	1008.7	910.9	797.6	758.5
60°	930.5	879.7	797.6	699.8	668.5
62.5°	805.4	766.3	695.9	613.8	652.9
65°	692.0	652.9	590.4	602.1	500.4
67.5°	566.9	547.3	492.6	437.9	422.2
70°	461.3	437.9	418.3	359.7	344.0
72.5°	367.5	344.0	316.7	285.4	273.7
75°	277.6	258.0	242.4	230.7	254.1
77.5°	191.6	183.8	172.0	160.3	156.4
80°	125.1	121.2	117.3	113.4	109.5
82.5°	74.3	74.3	74.3	74.3	74.3
85°	39.1	43.0	46.9	50.8	54.7
87.5°	23.5	23.5	27.4	31.3	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)