

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: P562940

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562940
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-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 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: 6565.0 lumens
Efficiency: N/A
Efficacy: 98.6 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

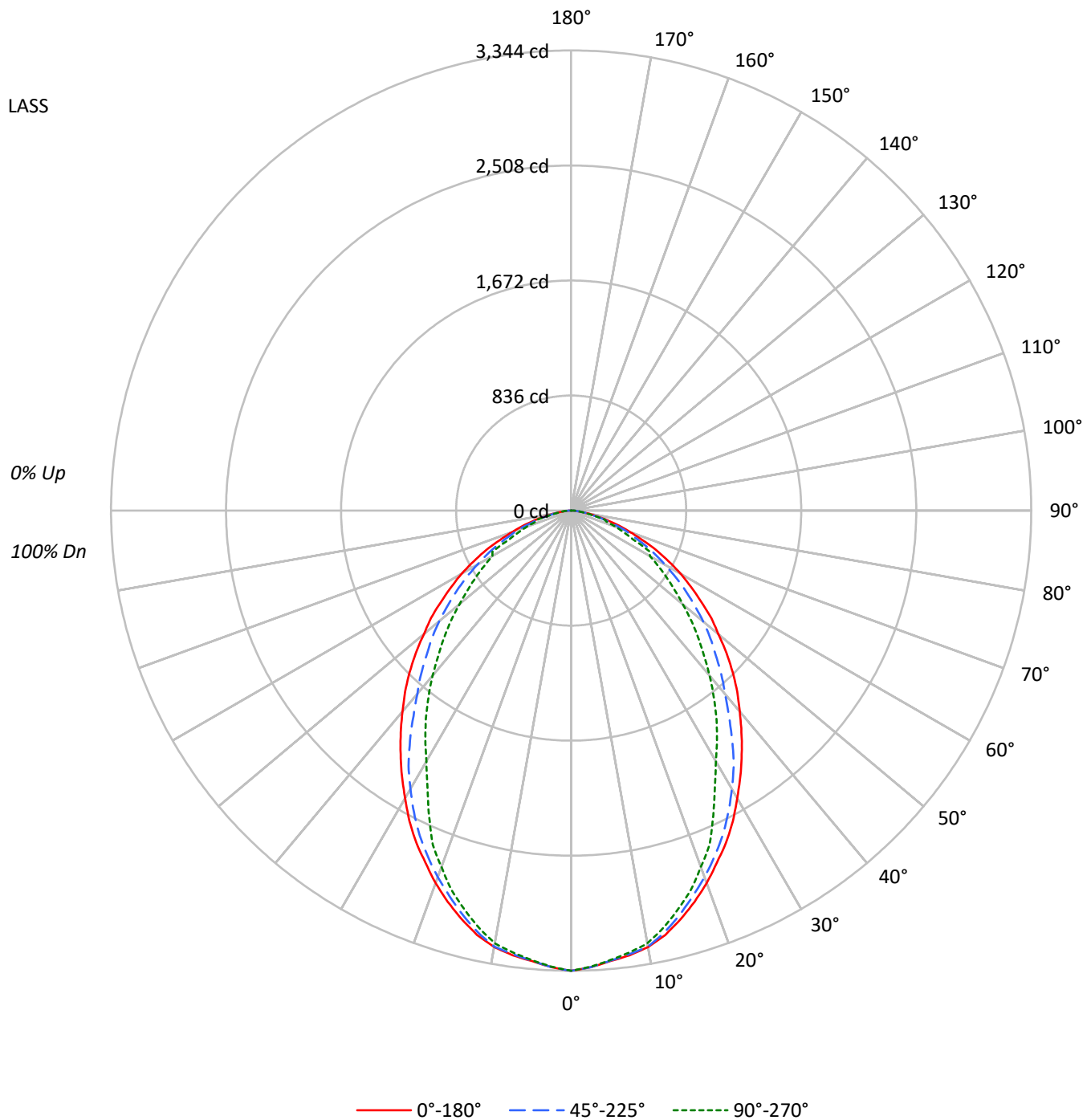
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4499	4499	4499
5°	4438	4433	4428
10°	4400	4395	4363
15°	4281	4238	4179
20°	4124	4058	3947
25°	3954	3868	3627
30°	3748	3628	3267
35°	3550	3353	3023
40°	3348	3056	2750
45°	3156	2825	2486
50°	2921	2622	2217
55°	2703	2376	1986
60°	2476	2122	1779
65°	2179	1859	1576
70°	1795	1627	1338
75°	1427	1246	1306
80°	958	899	838
85°	597	716	835

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3156 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.3	4.7
10°-20°	854.3	13.0
20°-30°	1182.7	18.0
30°-40°	1261.2	19.2
40°-50°	1150.5	17.5
50°-60°	901.4	13.7
60°-70°	587.5	8.9
70°-80°	260.3	4.0
80°-90°	55.9	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°	2348.4	35.8
0°-40°	3609.5	55.0
0°-60°	5661.4	86.2
0°-90°	6565.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6565.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3344	3344	3344	3344	3344	
5°	3286	3282	3282	3278	3278	312
15°	3074	3074	3043	3012	3000	864
25°	2664	2648	2606	2513	2443	1223
35°	2161	2146	2041	1887	1840	1351
45°	1658	1624	1485	1361	1307	1278
55°	1152	1117	1013	893	847	1033
65°	684	646	584	595	495	674
75°	274	255	240	228	251	294
85°	39	42	46	50	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3344.1	3344.1	3344.1	3344.1	3344.1
2.5°	3320.9	3320.9	3320.9	3317.1	3317.1
5°	3286.1	3282.3	3282.3	3278.4	3278.4
7.5°	3259.1	3255.2	3251.3	3247.5	3239.7
10°	3220.4	3220.4	3216.5	3197.2	3193.3
12.5°	3158.6	3154.7	3139.2	3112.2	3104.4
15°	3073.5	3073.5	3042.6	3011.6	3000.0
17.5°	2980.7	2976.8	2938.2	2907.3	2891.8
20°	2880.2	2872.5	2833.8	2783.5	2756.5
22.5°	2768.1	2768.1	2721.7	2656.0	2628.9
25°	2663.7	2648.2	2605.7	2512.9	2443.3
27.5°	2543.9	2520.7	2474.3	2342.8	2261.6
30°	2412.4	2400.8	2335.1	2165.0	2103.1
32.5°	2288.7	2269.4	2199.8	2021.9	1971.7
35°	2161.1	2145.7	2041.3	1886.6	1840.2
37.5°	2033.5	2014.2	1882.8	1759.0	1701.1
40°	1906.0	1882.8	1739.7	1627.6	1565.7
42.5°	1786.1	1755.2	1616.0	1496.2	1426.6
45°	1658.5	1623.7	1484.6	1360.8	1306.7
47.5°	1531.0	1500.0	1372.4	1244.9	1183.0
50°	1395.6	1368.6	1252.6	1125.0	1059.3
52.5°	1283.5	1241.0	1128.9	1001.3	947.2
55°	1152.1	1117.3	1012.9	893.1	846.7
57.5°	1032.2	997.4	900.8	788.7	750.0
60°	920.1	869.9	788.7	692.0	661.1
62.5°	796.4	757.7	688.2	607.0	645.6
65°	684.3	645.6	583.8	595.4	494.9
67.5°	560.6	541.2	487.1	433.0	417.5
70°	456.2	433.0	413.7	355.7	340.2
72.5°	363.4	340.2	313.1	282.2	270.6
75°	274.5	255.2	239.7	228.1	251.3
77.5°	189.4	181.7	170.1	158.5	154.6
80°	123.7	119.8	116.0	112.1	108.2
82.5°	73.5	73.5	73.5	73.5	73.5
85°	38.7	42.5	46.4	50.3	54.1
87.5°	23.2	23.2	27.1	30.9	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)