

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: P561789

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561789
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-12-4-LD4-2STD-40-UNV-80-96-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6650.0 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

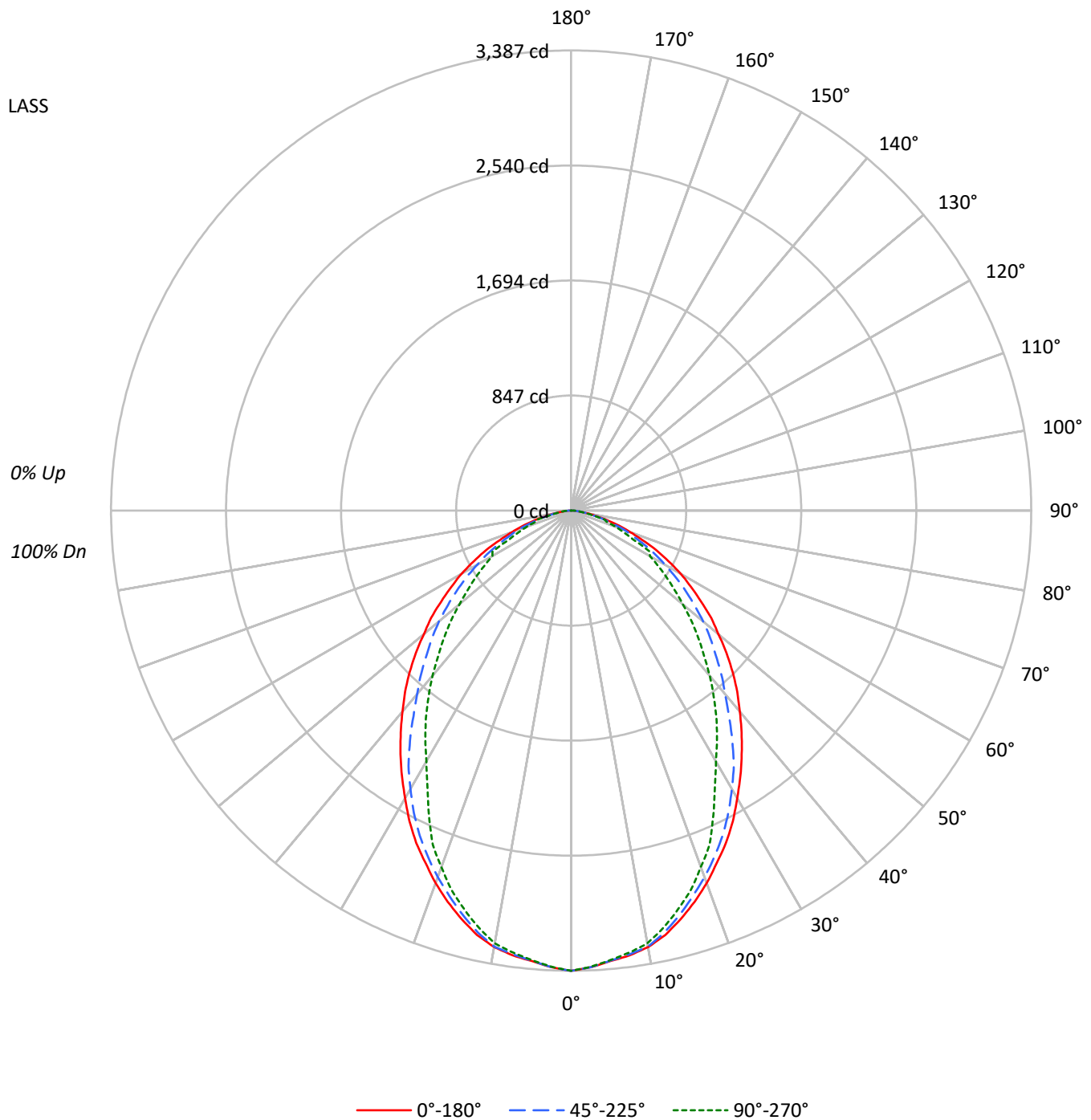
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													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°	9115	9115	9115
5°	8992	8981	8970
10°	8914	8903	8839
15°	8673	8586	8466
20°	8355	8220	7996
25°	8011	7837	7349
30°	7593	7350	6620
35°	7191	6793	6124
40°	6782	6190	5571
45°	6393	5723	5037
50°	5918	5312	4492
55°	5475	4814	4023
60°	5016	4300	3604
65°	4413	3765	3192
70°	3636	3297	2711
75°	2890	2524	2646
80°	1942	1821	1700
85°	1210	1451	1692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6393 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.3	4.7
10°-20°	865.4	13.0
20°-30°	1198.1	18.0
30°-40°	1277.5	19.2
40°-50°	1165.4	17.5
50°-60°	913.0	13.7
60°-70°	595.1	8.9
70°-80°	263.6	4.0
80°-90°	56.6	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°	2378.8	35.8
0°-40°	3656.2	55.0
0°-60°	5734.7	86.2
0°-90°	6650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3387	3387	3387	3387	3387	
5°	3329	3325	3325	3321	3321	316
15°	3113	3113	3082	3051	3039	875
25°	2698	2682	2639	2546	2475	1239
35°	2189	2173	2068	1911	1864	1369
45°	1680	1645	1504	1378	1324	1294
55°	1167	1132	1026	905	858	1047
65°	693	654	591	603	501	683
75°	278	258	243	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°	3387.4	3387.4	3387.4	3387.4	3387.4
2.5°	3363.9	3363.9	3363.9	3360.0	3360.0
5°	3328.7	3324.8	3324.8	3320.8	3320.8
7.5°	3301.3	3297.4	3293.4	3289.5	3281.7
10°	3262.1	3262.1	3258.2	3238.6	3234.7
12.5°	3199.4	3195.5	3179.9	3152.5	3144.6
15°	3113.3	3113.3	3082.0	3050.6	3038.9
17.5°	3019.3	3015.4	2976.2	2944.9	2929.2
20°	2917.5	2909.7	2870.5	2819.6	2792.2
22.5°	2803.9	2803.9	2756.9	2690.4	2662.9
25°	2698.2	2682.5	2639.4	2545.5	2475.0
27.5°	2576.8	2553.3	2506.3	2373.2	2290.9
30°	2443.6	2431.9	2365.3	2193.0	2130.4
32.5°	2318.3	2298.7	2228.3	2048.1	1997.2
35°	2189.1	2173.4	2067.7	1911.1	1864.1
37.5°	2059.9	2040.3	1907.1	1781.8	1723.1
40°	1930.6	1907.1	1762.2	1648.7	1586.0
42.5°	1809.2	1777.9	1636.9	1515.5	1445.0
45°	1680.0	1644.8	1503.8	1378.5	1323.6
47.5°	1550.8	1519.4	1390.2	1261.0	1198.3
50°	1413.7	1386.3	1268.8	1139.6	1073.0
52.5°	1300.1	1257.1	1143.5	1014.3	959.4
55°	1167.0	1131.8	1026.0	904.6	857.6
57.5°	1045.6	1010.4	912.4	798.9	759.7
60°	932.0	881.1	798.9	701.0	669.7
62.5°	806.7	767.6	697.1	614.8	654.0
65°	693.1	654.0	591.3	603.1	501.3
67.5°	567.8	548.3	493.4	438.6	422.9
70°	462.1	438.6	419.0	360.3	344.6
72.5°	368.1	344.6	317.2	285.9	274.1
75°	278.0	258.5	242.8	231.0	254.5
77.5°	191.9	184.1	172.3	160.6	156.6
80°	125.3	121.4	117.5	113.6	109.7
82.5°	74.4	74.4	74.4	74.4	74.4
85°	39.2	43.1	47.0	50.9	54.8
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)