

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: P561341

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561341
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-LD4-2HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8077.0 lumens
Efficiency: N/A
Efficacy: 93.5 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

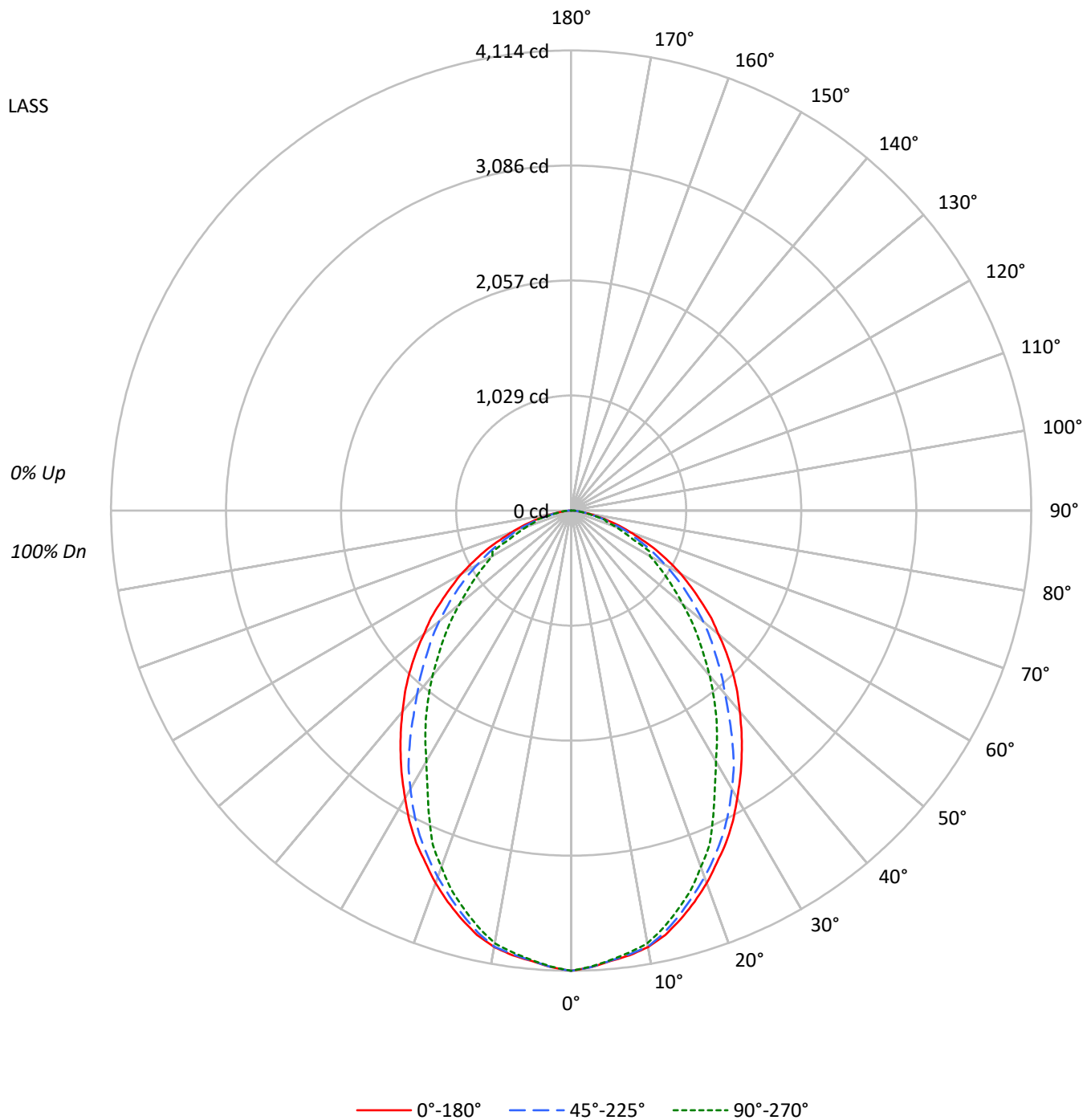
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11071	11071	11071
5°	10921	10908	10896
10°	10826	10814	10735
15°	10535	10428	10283
20°	10147	9984	9712
25°	9731	9519	8926
30°	9222	8927	8040
35°	8734	8250	7438
40°	8237	7519	6767
45°	7765	6951	6118
50°	7189	6452	5456
55°	6650	5847	4887
60°	6092	5222	4378
65°	5361	4573	3876
70°	4416	4004	3294
75°	3511	3066	3215
80°	2359	2211	2064
85°	1470	1763	2056

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7765 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	383.0	4.7
10°-20°	1051.1	13.0
20°-30°	1455.1	18.0
30°-40°	1551.6	19.2
40°-50°	1415.5	17.5
50°-60°	1108.9	13.7
60°-70°	722.8	8.9
70°-80°	320.2	4.0
80°-90°	68.8	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°	2889.2	35.8
0°-40°	4440.8	55.0
0°-60°	6965.3	86.2
0°-90°	8077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8077.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4114	4114	4114	4114	4114	
5°	4043	4038	4038	4034	4034	384
15°	3781	3781	3743	3705	3691	1063
25°	3277	3258	3206	3092	3006	1505
35°	2659	2640	2511	2321	2264	1662
45°	2040	1998	1826	1674	1608	1572
55°	1417	1375	1246	1099	1042	1271
65°	842	794	718	732	609	830
75°	338	314	295	281	309	362
85°	48	52	57	62	67	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4114.3	4114.3	4114.3	4114.3	4114.3
2.5°	4085.8	4085.8	4085.8	4081.0	4081.0
5°	4043.0	4038.2	4038.2	4033.5	4033.5
7.5°	4009.7	4004.9	4000.2	3995.4	3985.9
10°	3962.1	3962.1	3957.4	3933.6	3928.8
12.5°	3886.0	3881.3	3862.2	3828.9	3819.4
15°	3781.4	3781.4	3743.3	3705.3	3691.0
17.5°	3667.2	3662.5	3614.9	3576.8	3557.8
20°	3543.5	3534.0	3486.5	3424.6	3391.3
22.5°	3405.6	3405.6	3348.5	3267.7	3234.4
25°	3277.2	3258.2	3205.8	3091.7	3006.1
27.5°	3129.7	3101.2	3044.1	2882.4	2782.5
30°	2968.0	2953.7	2872.9	2663.6	2587.5
32.5°	2815.8	2792.0	2706.4	2487.6	2425.8
35°	2658.8	2639.8	2511.4	2321.1	2264.1
37.5°	2501.9	2478.1	2316.4	2164.2	2092.8
40°	2344.9	2316.4	2140.4	2002.5	1926.4
42.5°	2197.5	2159.4	1988.2	1840.7	1755.1
45°	2040.5	1997.7	1826.5	1674.3	1607.7
47.5°	1883.5	1845.5	1688.5	1531.6	1455.5
50°	1717.1	1683.8	1541.1	1384.1	1303.3
52.5°	1579.1	1526.8	1388.9	1231.9	1165.3
55°	1417.4	1374.6	1246.2	1098.7	1041.7
57.5°	1270.0	1227.2	1108.2	970.3	922.7
60°	1132.0	1070.2	970.3	851.4	813.4
62.5°	979.8	932.3	846.6	746.8	794.3
65°	841.9	794.3	718.2	732.5	608.8
67.5°	689.7	665.9	599.3	532.7	513.7
70°	561.3	532.7	508.9	437.6	418.6
72.5°	447.1	418.6	385.3	347.2	333.0
75°	337.7	313.9	294.9	280.6	309.2
77.5°	233.1	223.6	209.3	195.0	190.3
80°	152.2	147.4	142.7	137.9	133.2
82.5°	90.4	90.4	90.4	90.4	90.4
85°	47.6	52.3	57.1	61.8	66.6
87.5°	28.5	28.5	33.3	38.1	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)