

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: P563068

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563068
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-LD4-3HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

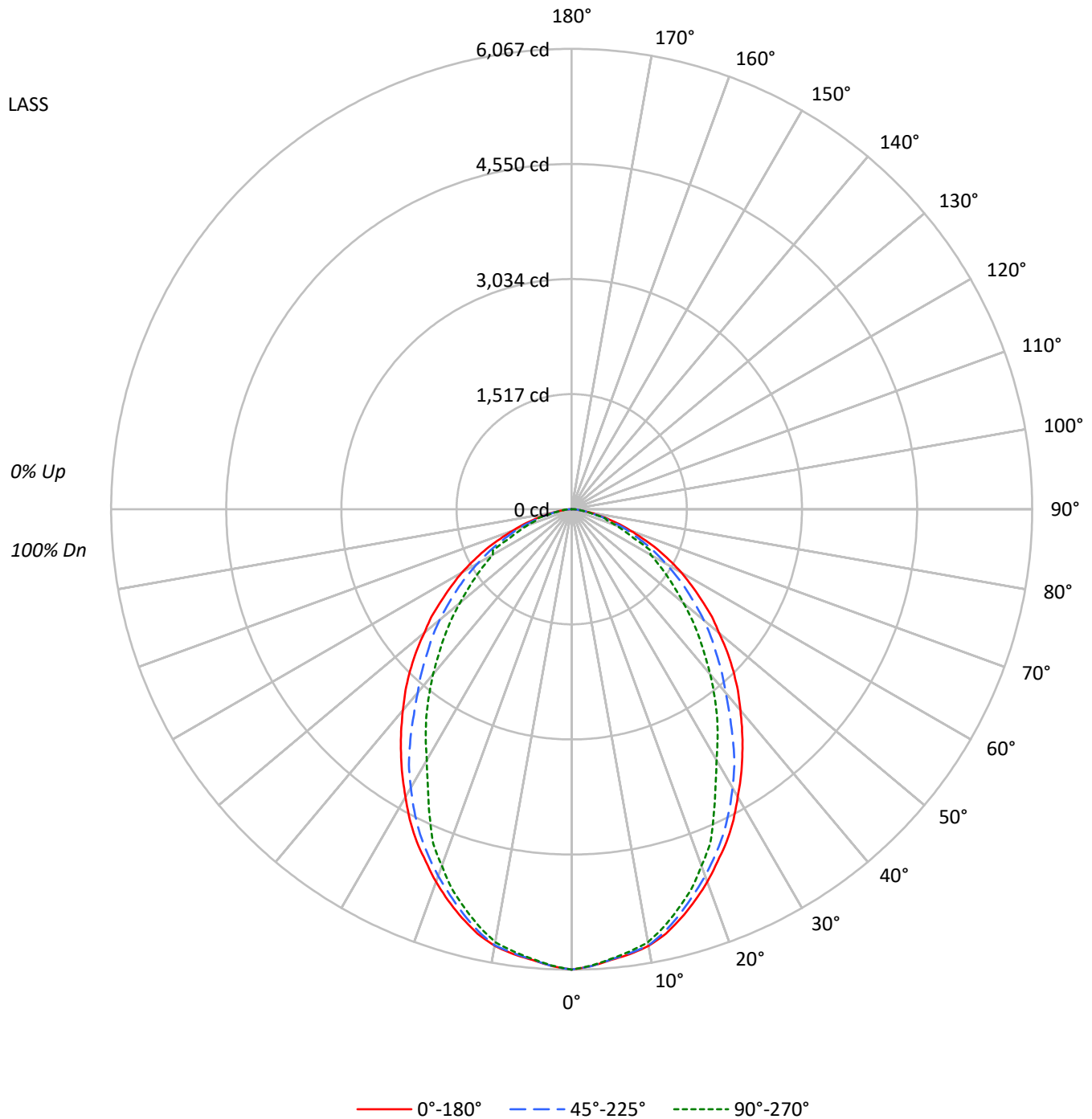
Lumens per Lamp: N/A
Luminaire Lumens: 11910.0 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	8163	8163	8163
5°	8052	8042	8033
10°	7982	7972	7915
15°	7767	7689	7581
20°	7482	7361	7160
25°	7174	7018	6581
30°	6799	6582	5928
35°	6440	6083	5484
40°	6073	5543	4989
45°	5725	5125	4511
50°	5300	4757	4023
55°	4903	4311	3603
60°	4492	3850	3227
65°	3952	3372	2858
70°	3256	2952	2428
75°	2589	2260	2370
80°	1739	1630	1522
85°	1082	1300	1516

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5725 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	564.7	4.7
10°-20°	1549.9	13.0
20°-30°	2145.7	18.0
30°-40°	2287.9	19.2
40°-50°	2087.3	17.5
50°-60°	1635.2	13.7
60°-70°	1065.7	8.9
70°-80°	472.2	4.0
80°-90°	101.4	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°	4260.3	35.8
0°-40°	6548.2	55.0
0°-60°	10270.7	86.2
0°-90°	11910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11910.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6067	6067	6067	6067	6067	
5°	5962	5955	5955	5948	5948	566
15°	5576	5576	5520	5464	5443	1568
25°	4832	4804	4727	4559	4433	2219
35°	3921	3893	3703	3423	3338	2451
45°	3009	2946	2693	2469	2371	2318
55°	2090	2027	1838	1620	1536	1875
65°	1241	1171	1059	1080	898	1223
75°	498	463	435	414	456	534
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6066.8	6066.8	6066.8	6066.8	6066.8
2.5°	6024.7	6024.7	6024.7	6017.7	6017.7
5°	5961.6	5954.6	5954.6	5947.6	5947.6
7.5°	5912.5	5905.5	5898.5	5891.5	5877.4
10°	5842.4	5842.4	5835.3	5800.3	5793.3
12.5°	5730.1	5723.1	5695.1	5646.0	5631.9
15°	5575.8	5575.8	5519.7	5463.6	5442.6
17.5°	5407.5	5400.5	5330.4	5274.3	5246.2
20°	5225.2	5211.1	5141.0	5049.8	5000.7
22.5°	5021.8	5021.8	4937.6	4818.4	4769.3
25°	4832.4	4804.3	4727.2	4558.9	4432.6
27.5°	4615.0	4572.9	4488.7	4250.3	4103.0
30°	4376.5	4355.5	4236.2	3927.6	3815.4
32.5°	4152.1	4117.0	3990.8	3668.1	3577.0
35°	3920.6	3892.6	3703.2	3422.7	3338.5
37.5°	3689.2	3654.1	3415.6	3191.2	3086.0
40°	3457.7	3415.6	3156.1	2952.7	2840.5
42.5°	3240.3	3184.2	2931.7	2714.3	2588.0
45°	3008.8	2945.7	2693.2	2468.8	2370.6
47.5°	2777.4	2721.3	2489.8	2258.4	2146.2
50°	2531.9	2482.8	2272.4	2041.0	1921.7
52.5°	2328.5	2251.4	2048.0	1816.5	1718.3
55°	2090.1	2026.9	1837.6	1620.1	1536.0
57.5°	1872.6	1809.5	1634.2	1430.8	1360.6
60°	1669.2	1578.1	1430.8	1255.4	1199.3
62.5°	1444.8	1374.7	1248.4	1101.1	1171.3
65°	1241.4	1171.3	1059.1	1080.1	897.7
67.5°	1017.0	981.9	883.7	785.5	757.5
70°	827.6	785.5	750.5	645.3	617.2
72.5°	659.3	617.2	568.1	512.0	491.0
75°	498.0	462.9	434.8	413.8	455.9
77.5°	343.7	329.6	308.6	287.6	280.5
80°	224.4	217.4	210.4	203.4	196.4
82.5°	133.3	133.3	133.3	133.3	133.3
85°	70.1	77.1	84.2	91.2	98.2
87.5°	42.1	42.1	49.1	56.1	63.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)