

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: P563199

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563199
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-50-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14096.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

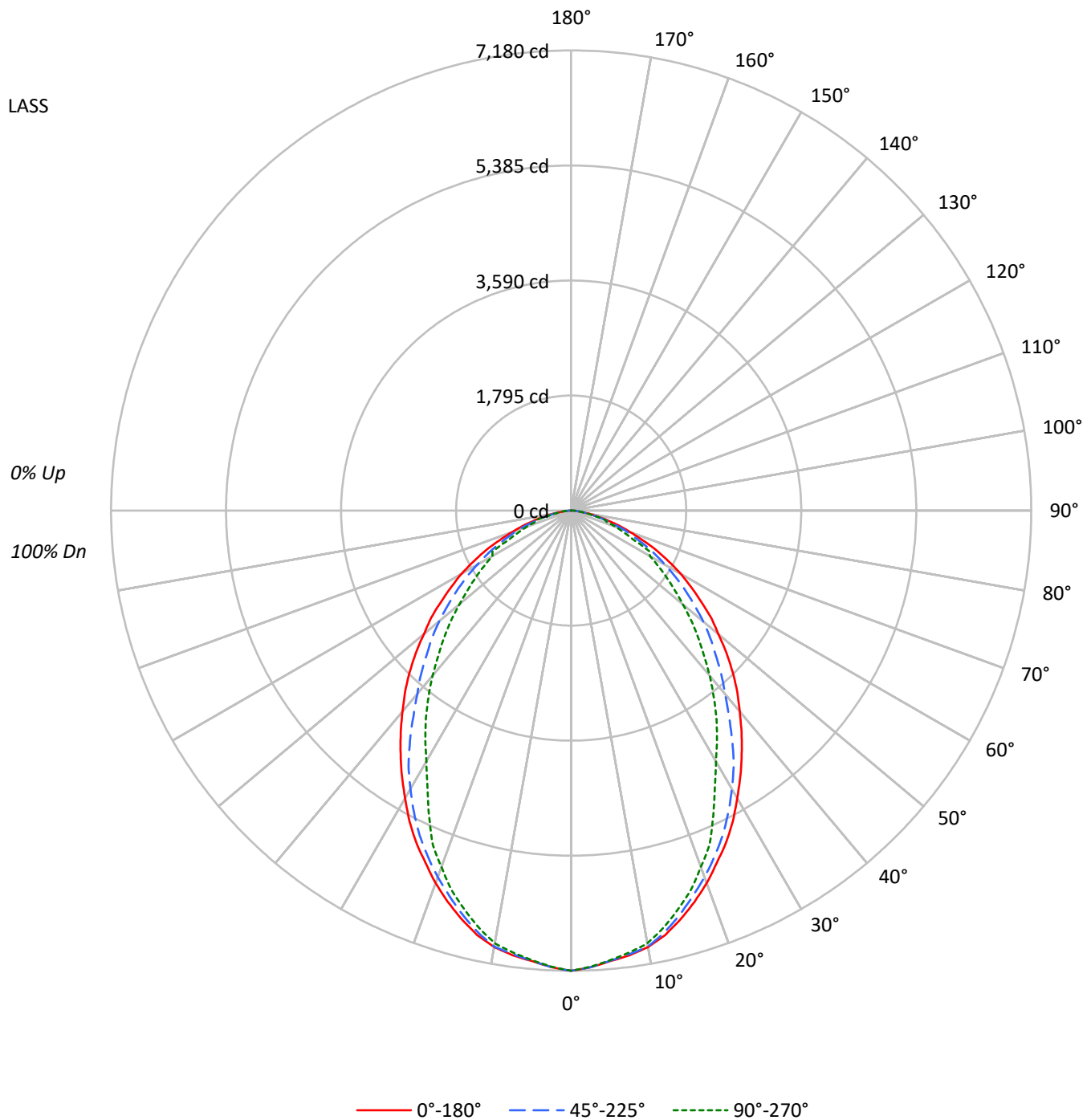
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9661	9661	9661
5°	9530	9519	9507
10°	9447	9436	9368
15°	9192	9100	8973
20°	8855	8712	8474
25°	8491	8306	7788
30°	8048	7790	7016
35°	7622	7199	6490
40°	7188	6561	5905
45°	6776	6065	5339
50°	6273	5630	4761
55°	5803	5102	4264
60°	5316	4557	3820
65°	4678	3990	3383
70°	3853	3494	2874
75°	3064	2676	2805
80°	2058	1929	1801
85°	1281	1538	1794

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6776 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	668.4	4.7
10°-20°	1834.3	13.0
20°-30°	2539.5	18.0
30°-40°	2707.9	19.2
40°-50°	2470.4	17.5
50°-60°	1935.3	13.7
60°-70°	1261.4	8.9
70°-80°	558.8	4.0
80°-90°	120.0	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°	5042.3	35.8
0°-40°	7750.1	55.0
0°-60°	12155.8	86.2
0°-90°	14096.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14096.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7180	7180	7180	7180	7180	
5°	7056	7048	7048	7039	7039	670
15°	6599	6599	6533	6466	6442	1855
25°	5719	5686	5595	5396	5246	2626
35°	4640	4607	4383	4051	3951	2901
45°	3561	3486	3188	2922	2806	2743
55°	2474	2399	2175	1918	1818	2219
65°	1469	1386	1253	1278	1062	1448
75°	589	548	515	490	540	632
85°	83	91	100	108	116	115
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7180.3	7180.3	7180.3	7180.3	7180.3
2.5°	7130.5	7130.5	7130.5	7122.2	7122.2
5°	7055.8	7047.5	7047.5	7039.2	7039.2
7.5°	6997.7	6989.4	6981.1	6972.8	6956.2
10°	6914.7	6914.7	6906.4	6864.9	6856.6
12.5°	6781.9	6773.6	6740.4	6682.3	6665.7
15°	6599.2	6599.2	6532.8	6466.4	6441.5
17.5°	6400.0	6391.7	6308.7	6242.3	6209.1
20°	6184.2	6167.6	6084.6	5976.7	5918.6
22.5°	5943.5	5943.5	5843.9	5702.7	5644.6
25°	5719.3	5686.1	5594.8	5395.6	5246.2
27.5°	5462.0	5412.2	5312.6	5030.4	4856.1
30°	5179.8	5154.9	5013.8	4648.5	4515.7
32.5°	4914.2	4872.7	4723.2	4341.4	4233.5
35°	4640.2	4607.0	4382.9	4050.9	3951.2
37.5°	4366.3	4324.8	4042.6	3776.9	3652.4
40°	4092.4	4042.6	3735.4	3494.7	3361.9
42.5°	3835.0	3768.6	3469.8	3212.5	3063.0
45°	3561.1	3486.4	3187.6	2921.9	2805.7
47.5°	3287.2	3220.8	2946.8	2672.9	2540.1
50°	2996.6	2938.5	2689.5	2415.6	2274.5
52.5°	2755.9	2664.6	2423.9	2149.9	2033.7
55°	2473.7	2399.0	2174.8	1917.5	1817.9
57.5°	2216.4	2141.6	1934.1	1693.4	1610.4
60°	1975.6	1867.7	1693.4	1485.9	1419.5
62.5°	1710.0	1627.0	1477.6	1303.2	1386.3
65°	1469.3	1386.3	1253.4	1278.3	1062.5
67.5°	1203.6	1162.1	1045.9	929.7	896.5
70°	979.5	929.7	888.2	763.7	730.5
72.5°	780.3	730.5	672.4	606.0	581.1
75°	589.4	547.9	514.7	489.8	539.6
77.5°	406.7	390.1	365.2	340.3	332.0
80°	265.6	257.3	249.0	240.7	232.4
82.5°	157.7	157.7	157.7	157.7	157.7
85°	83.0	91.3	99.6	107.9	116.2
87.5°	49.8	49.8	58.1	66.4	74.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)