

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: P563196

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563196
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-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12719.0 lumens
Efficiency: N/A
Efficacy: 98.1 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

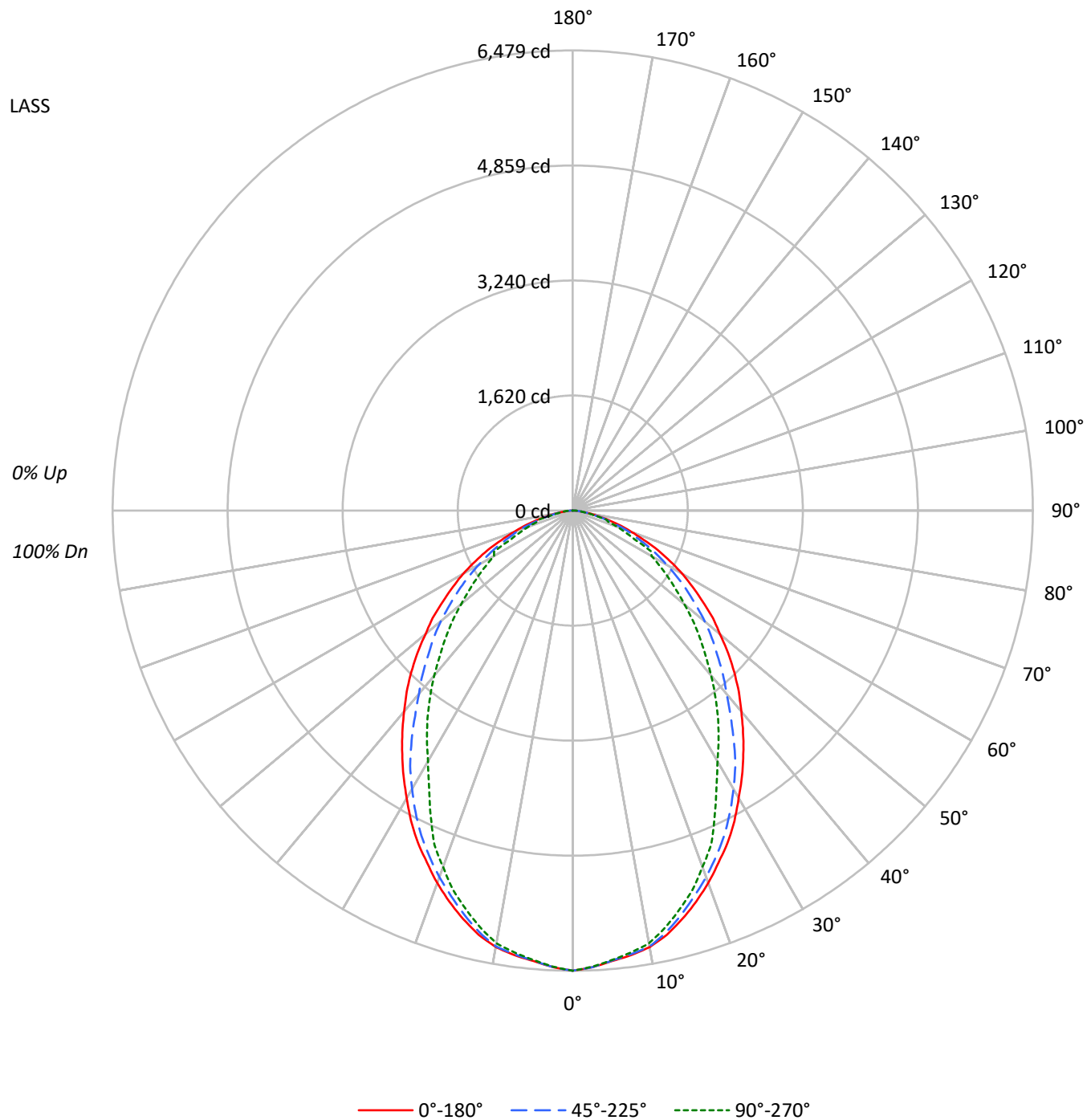
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	8717	8717	8717
5°	8599	8589	8579
10°	8524	8514	8453
15°	8294	8211	8096
20°	7990	7861	7647
25°	7661	7495	7028
30°	7261	7029	6330
35°	6877	6496	5856
40°	6486	5920	5328
45°	6114	5473	4817
50°	5660	5080	4296
55°	5236	4603	3848
60°	4797	4112	3447
65°	4221	3601	3052
70°	3477	3153	2593
75°	2765	2414	2531
80°	1857	1741	1625
85°	1156	1388	1619

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6114 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	603.1	4.7
10°-20°	1655.1	13.0
20°-30°	2291.4	18.0
30°-40°	2443.3	19.2
40°-50°	2229.0	17.5
50°-60°	1746.3	13.7
60°-70°	1138.1	8.9
70°-80°	504.2	4.0
80°-90°	108.3	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°	4549.7	35.8
0°-40°	6993.0	55.0
0°-60°	10968.4	86.2
0°-90°	12719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6479	6479	6479	6479	6479	
5°	6366	6359	6359	6352	6352	604
15°	5955	5955	5895	5835	5812	1674
25°	5161	5131	5048	4868	4734	2369
35°	4187	4157	3955	3655	3565	2618
45°	3213	3146	2876	2636	2532	2475
55°	2232	2165	1962	1730	1640	2002
65°	1326	1251	1131	1154	959	1306
75°	532	494	464	442	487	570
85°	75	82	90	97	105	104
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6478.9	6478.9	6478.9	6478.9	6478.9
2.5°	6433.9	6433.9	6433.9	6426.5	6426.5
5°	6366.5	6359.0	6359.0	6351.6	6351.6
7.5°	6314.1	6306.6	6299.1	6291.6	6276.7
10°	6239.2	6239.2	6231.7	6194.3	6186.8
12.5°	6119.4	6111.9	6081.9	6029.5	6014.5
15°	5954.6	5954.6	5894.7	5834.7	5812.3
17.5°	5774.8	5767.3	5692.4	5632.5	5602.6
20°	5580.1	5565.1	5490.2	5392.8	5340.4
22.5°	5362.9	5362.9	5273.0	5145.7	5093.2
25°	5160.6	5130.7	5048.3	4868.5	4733.7
27.5°	4928.4	4883.5	4793.6	4539.0	4381.7
30°	4673.8	4651.3	4524.0	4194.4	4074.6
32.5°	4434.1	4396.7	4261.8	3917.3	3819.9
35°	4186.9	4157.0	3954.7	3655.1	3565.3
37.5°	3939.8	3902.3	3647.7	3408.0	3295.6
40°	3692.6	3647.7	3370.5	3153.3	3033.5
42.5°	3460.4	3400.5	3130.8	2898.6	2763.8
45°	3213.2	3145.8	2876.2	2636.5	2531.6
47.5°	2966.1	2906.1	2659.0	2411.8	2292.0
50°	2703.9	2651.5	2426.8	2179.6	2052.3
52.5°	2486.7	2404.3	2187.1	1939.9	1835.1
55°	2232.0	2164.6	1962.4	1730.2	1640.3
57.5°	1999.8	1932.4	1745.2	1528.0	1453.1
60°	1782.6	1685.3	1528.0	1340.7	1280.8
62.5°	1542.9	1468.0	1333.2	1175.9	1250.8
65°	1325.7	1250.8	1131.0	1153.5	958.7
67.5°	1086.1	1048.6	943.7	838.9	808.9
70°	883.8	838.9	801.4	689.1	659.1
72.5°	704.1	659.1	606.7	546.8	524.3
75°	531.8	494.3	464.4	441.9	486.9
77.5°	367.0	352.0	329.6	307.1	299.6
80°	239.7	232.2	224.7	217.2	209.7
82.5°	142.3	142.3	142.3	142.3	142.3
85°	74.9	82.4	89.9	97.4	104.9
87.5°	44.9	44.9	52.4	59.9	67.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)