

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: P563207

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563207
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-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13138.0 lumens
Efficiency: N/A
Efficacy: 101.4 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

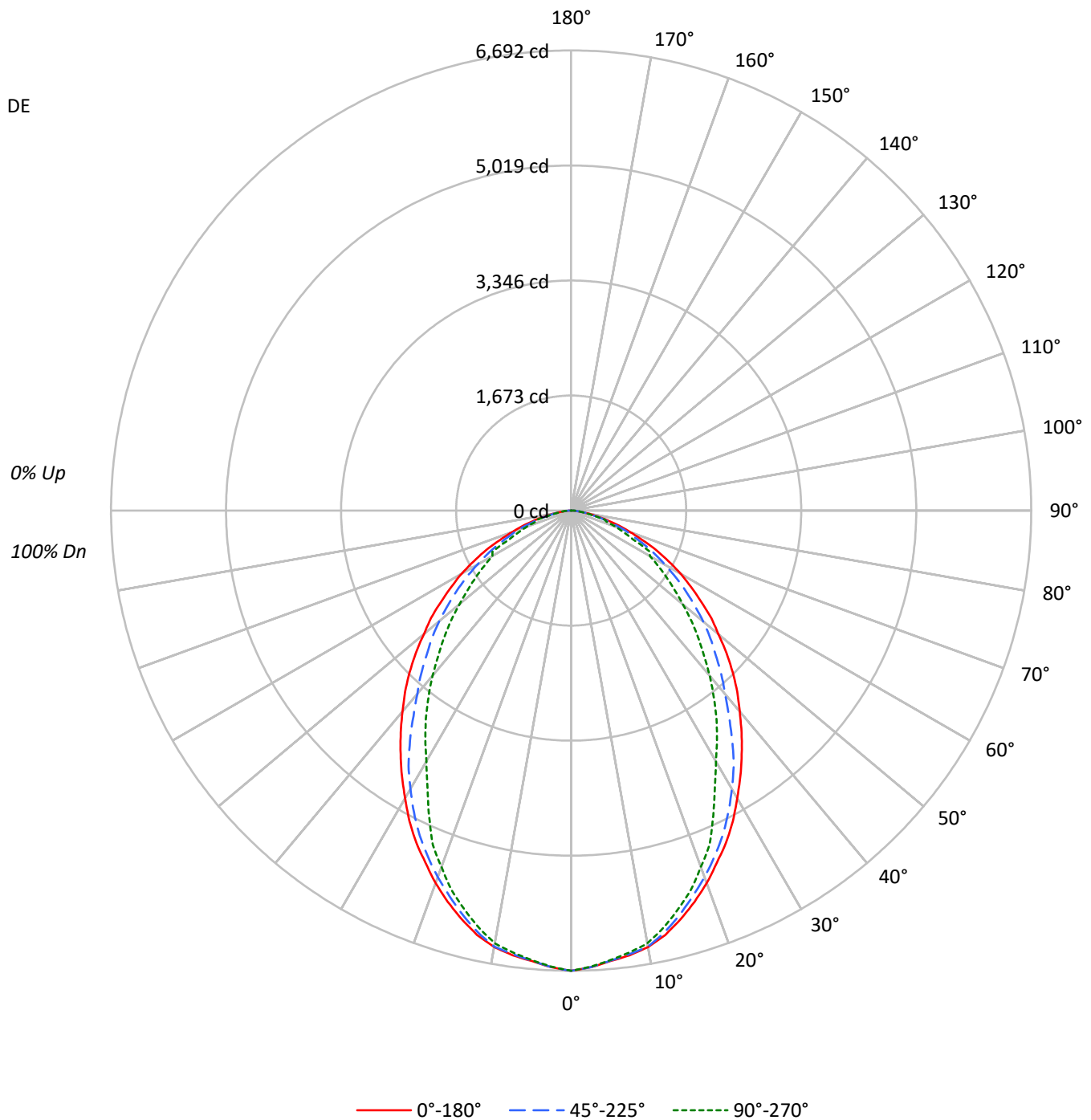
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9004	9004	9004
5°	8882	8872	8861
10°	8805	8795	8731
15°	8568	8482	8363
20°	8253	8120	7898
25°	7914	7742	7259
30°	7501	7260	6539
35°	7104	6710	6049
40°	6699	6115	5504
45°	6316	5653	4976
50°	5846	5247	4437
55°	5408	4755	3975
60°	4955	4247	3560
65°	4360	3720	3153
70°	3591	3257	2678
75°	2856	2494	2614
80°	1918	1798	1678
85°	1195	1433	1672

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	623.0	4.7
10°-20°	1709.7	13.0
20°-30°	2366.9	18.0
30°-40°	2523.8	19.2
40°-50°	2302.5	17.5
50°-60°	1803.8	13.7
60°-70°	1175.6	8.9
70°-80°	520.9	4.0
80°-90°	111.8	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°	4699.6	35.8
0°-40°	7223.4	55.0
0°-60°	11329.7	86.2
0°-90°	13138.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13138.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6692	6692	6692	6692	6692	
5°	6576	6568	6568	6561	6561	624
15°	6151	6151	6089	6027	6004	1729
25°	5331	5300	5215	5029	4890	2447
35°	4325	4294	4085	3776	3683	2704
45°	3319	3250	2971	2723	2615	2557
55°	2306	2236	2027	1787	1694	2068
65°	1369	1292	1168	1192	990	1350
75°	549	511	480	456	503	589
85°	77	85	93	101	108	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6692.3	6692.3	6692.3	6692.3	6692.3
2.5°	6645.9	6645.9	6645.9	6638.2	6638.2
5°	6576.3	6568.5	6568.5	6560.8	6560.8
7.5°	6522.1	6514.4	6506.6	6498.9	6483.4
10°	6444.7	6444.7	6437.0	6398.3	6390.6
12.5°	6321.0	6313.2	6282.3	6228.1	6212.6
15°	6150.7	6150.7	6088.9	6027.0	6003.7
17.5°	5965.1	5957.3	5880.0	5818.1	5787.1
20°	5763.9	5748.4	5671.1	5570.5	5516.3
22.5°	5539.5	5539.5	5446.7	5315.2	5261.0
25°	5330.6	5299.7	5214.6	5028.9	4889.7
27.5°	5090.8	5044.4	4951.5	4688.5	4526.0
30°	4827.8	4804.5	4673.0	4332.6	4208.8
32.5°	4580.2	4541.5	4402.2	4046.3	3945.8
35°	4324.9	4293.9	4085.0	3775.6	3682.7
37.5°	4069.6	4030.9	3767.8	3520.2	3404.2
40°	3814.2	3767.8	3481.6	3257.2	3133.4
42.5°	3574.4	3512.5	3234.0	2994.1	2854.9
45°	3319.1	3249.5	2970.9	2723.3	2615.0
47.5°	3063.8	3001.9	2746.6	2491.2	2367.5
50°	2793.0	2738.8	2506.7	2251.4	2119.9
52.5°	2568.6	2483.5	2259.1	2003.8	1895.5
55°	2305.6	2235.9	2027.0	1787.2	1694.4
57.5°	2065.7	1996.1	1802.7	1578.3	1500.9
60°	1841.4	1740.8	1578.3	1384.9	1323.0
62.5°	1593.8	1516.4	1377.1	1214.7	1292.0
65°	1369.4	1292.0	1168.3	1191.5	990.3
67.5°	1121.8	1083.2	974.8	866.5	835.6
70°	912.9	866.5	827.8	711.8	680.8
72.5°	727.3	680.8	626.7	564.8	541.6
75°	549.3	510.6	479.7	456.5	502.9
77.5°	379.1	363.6	340.4	317.2	309.5
80°	247.6	239.8	232.1	224.4	216.6
82.5°	147.0	147.0	147.0	147.0	147.0
85°	77.4	85.1	92.8	100.6	108.3
87.5°	46.4	46.4	54.2	61.9	69.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)