

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: P564044

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564044
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-LD4-4STD-35-UNV-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12299.0 lumens
Efficiency: N/A
Efficacy: 92.3 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

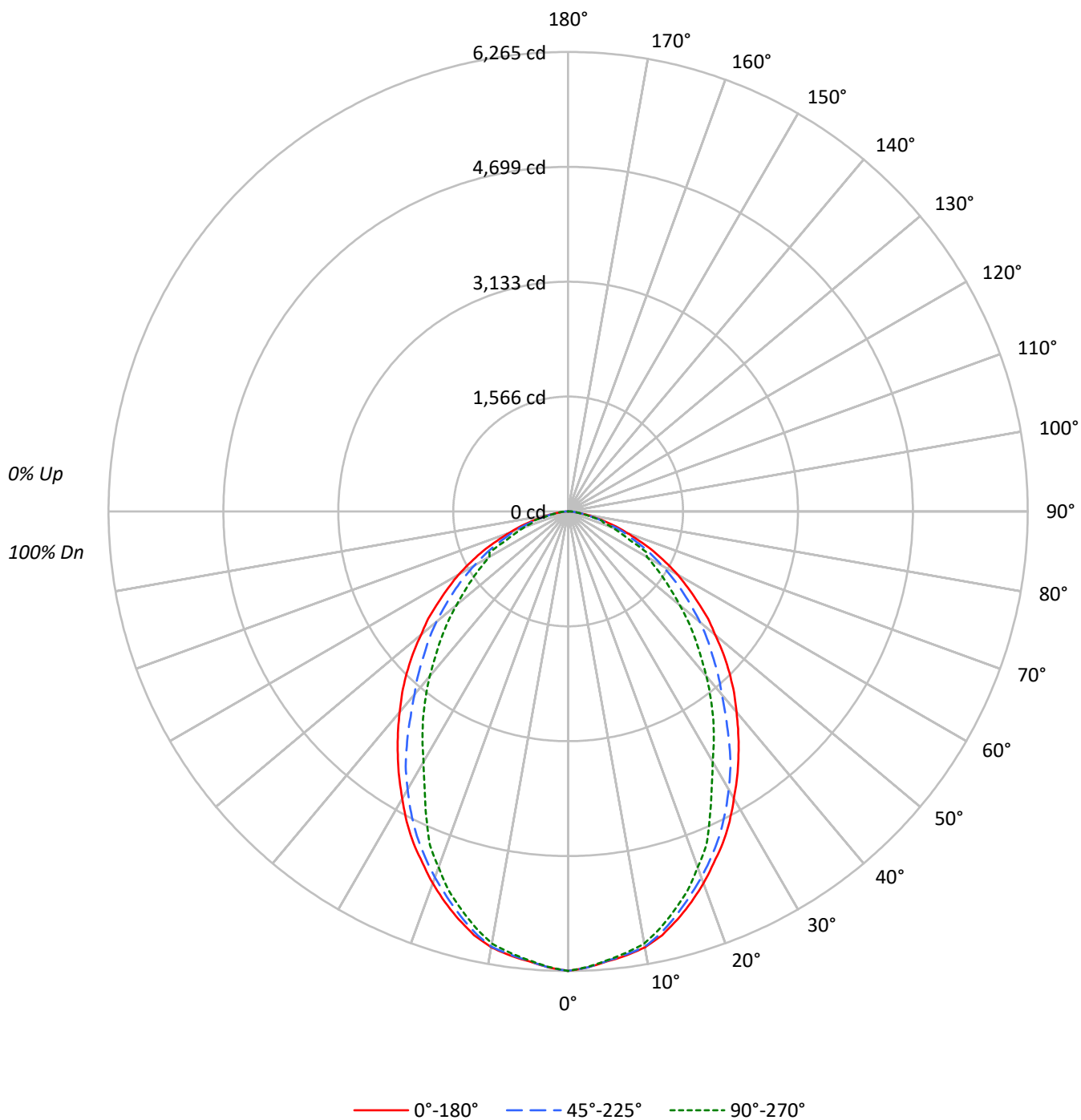
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8429	8429	8429
5°	8315	8305	8295
10°	8243	8233	8174
15°	8021	7940	7829
20°	7726	7601	7394
25°	7408	7247	6796
30°	7022	6797	6121
35°	6650	6281	5663
40°	6272	5724	5152
45°	5912	5292	4658
50°	5473	4912	4154
55°	5063	4451	3721
60°	4639	3976	3333
65°	4082	3482	2952
70°	3362	3049	2507
75°	2673	2334	2447
80°	1796	1684	1571
85°	1118	1342	1565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5912 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	583.2	4.7
10°-20°	1600.5	13.0
20°-30°	2215.8	18.0
30°-40°	2362.7	19.2
40°-50°	2155.4	17.5
50°-60°	1688.6	13.7
60°-70°	1100.6	8.9
70°-80°	487.6	4.0
80°-90°	104.7	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°	4399.5	35.8
0°-40°	6762.1	55.0
0°-60°	10606.2	86.2
0°-90°	12299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12299.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6265	6265	6265	6265	6265	
5°	6156	6149	6149	6142	6142	584
15°	5758	5758	5700	5642	5620	1619
25°	4990	4961	4882	4708	4577	2291
35°	4049	4020	3824	3534	3448	2531
45°	3107	3042	2781	2549	2448	2393
55°	2158	2093	1898	1673	1586	1936
65°	1282	1210	1094	1115	927	1263
75°	514	478	449	427	471	551
85°	72	80	87	94	101	100
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6264.9	6264.9	6264.9	6264.9	6264.9
2.5°	6221.5	6221.5	6221.5	6214.2	6214.2
5°	6156.3	6149.1	6149.1	6141.8	6141.8
7.5°	6105.6	6098.4	6091.1	6083.9	6069.4
10°	6033.2	6033.2	6025.9	5989.7	5982.5
12.5°	5917.3	5910.1	5881.1	5830.4	5815.9
15°	5758.0	5758.0	5700.0	5642.1	5620.3
17.5°	5584.1	5576.9	5504.5	5446.5	5417.5
20°	5395.8	5381.3	5308.9	5214.8	5164.1
22.5°	5185.8	5185.8	5098.9	4975.7	4925.0
25°	4990.2	4961.3	4881.6	4707.8	4577.4
27.5°	4765.7	4722.2	4635.3	4389.1	4237.0
30°	4519.5	4497.7	4374.6	4055.9	3940.0
32.5°	4287.7	4251.5	4121.1	3787.9	3693.8
35°	4048.7	4019.7	3824.2	3534.4	3447.5
37.5°	3809.7	3773.5	3527.2	3295.4	3186.8
40°	3570.7	3527.2	3259.2	3049.2	2933.3
42.5°	3346.1	3288.2	3027.5	2802.9	2672.6
45°	3107.1	3041.9	2781.2	2549.4	2448.0
47.5°	2868.1	2810.2	2571.2	2332.2	2216.3
50°	2614.6	2563.9	2346.6	2107.6	1984.5
52.5°	2404.6	2324.9	2114.9	1875.9	1774.5
55°	2158.3	2093.1	1897.6	1673.1	1586.2
57.5°	1933.8	1868.6	1687.6	1477.5	1405.1
60°	1723.8	1629.6	1477.5	1296.4	1238.5
62.5°	1492.0	1419.6	1289.2	1137.1	1209.5
65°	1282.0	1209.5	1093.6	1115.4	927.1
67.5°	1050.2	1014.0	912.6	811.2	782.2
70°	854.6	811.2	775.0	666.3	637.4
72.5°	680.8	637.4	586.7	528.7	507.0
75°	514.2	478.0	449.0	427.3	470.8
77.5°	354.9	340.4	318.7	297.0	289.7
80°	231.8	224.5	217.3	210.0	202.8
82.5°	137.6	137.6	137.6	137.6	137.6
85°	72.4	79.7	86.9	94.2	101.4
87.5°	43.5	43.5	50.7	57.9	65.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)