

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: P563021

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563021
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-LD4-2STD-50-UNV-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7549.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

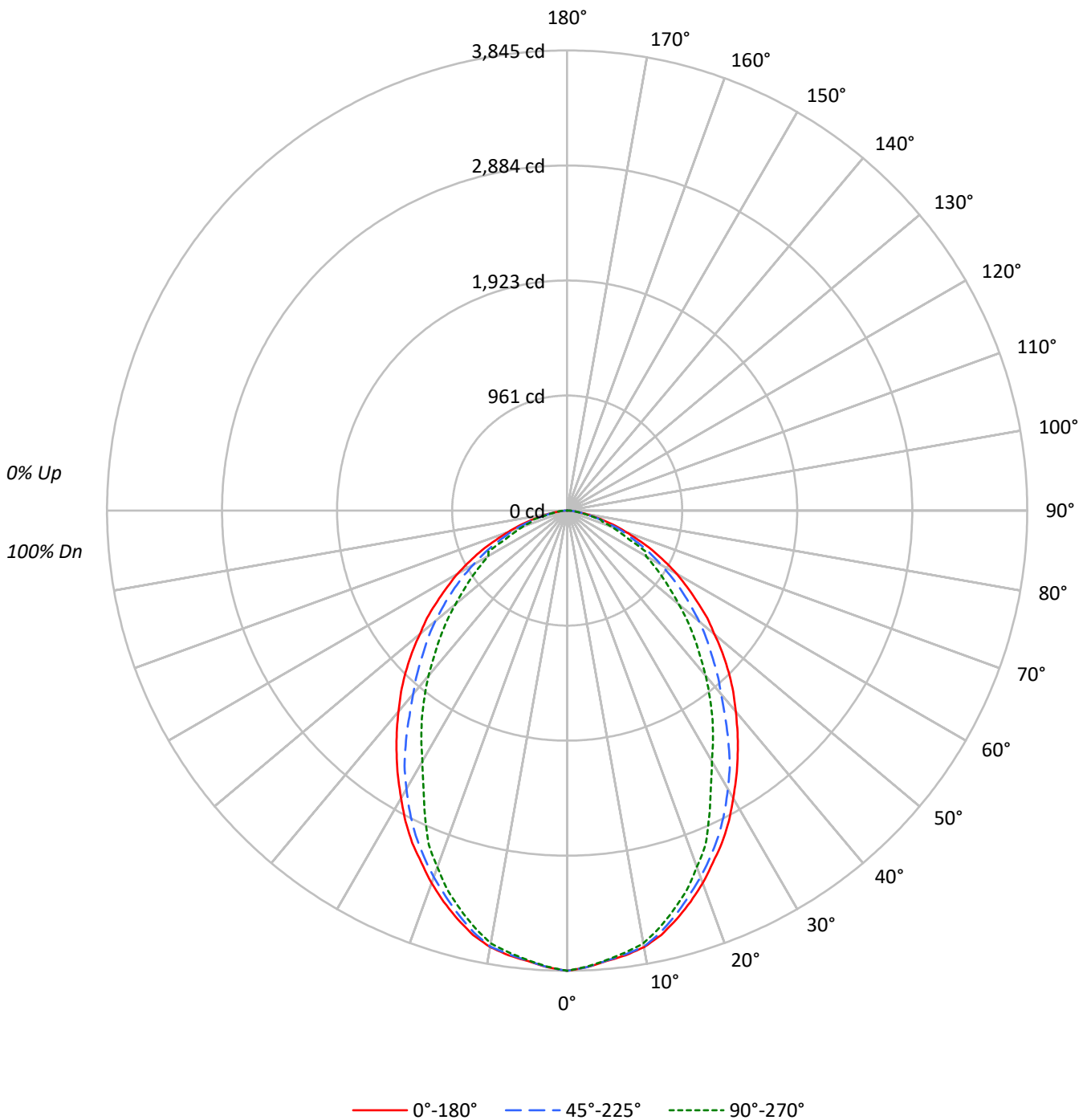
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5174	5174	5174
5°	5104	5098	5092
10°	5059	5053	5017
15°	4923	4873	4805
20°	4742	4666	4538
25°	4547	4448	4171
30°	4310	4172	3757
35°	4082	3855	3476
40°	3849	3514	3162
45°	3629	3248	2859
50°	3359	3015	2550
55°	3108	2732	2284
60°	2847	2440	2046
65°	2505	2137	1812
70°	2064	1871	1539
75°	1641	1433	1502
80°	1103	1034	965
85°	687	823	960

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3629 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.0	4.7
10°-20°	982.4	13.0
20°-30°	1360.0	18.0
30°-40°	1450.2	19.2
40°-50°	1323.0	17.5
50°-60°	1036.4	13.7
60°-70°	675.5	8.9
70°-80°	299.3	4.0
80°-90°	64.3	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°	2700.3	35.8
0°-40°	4150.5	55.0
0°-60°	6510.0	86.2
0°-90°	7549.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7549.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3845	3845	3845	3845	3845	
5°	3779	3774	3774	3770	3770	359
15°	3534	3534	3499	3463	3450	994
25°	3063	3045	2996	2890	2810	1406
35°	2485	2467	2347	2169	2116	1554
45°	1907	1867	1707	1565	1503	1469
55°	1325	1285	1165	1027	974	1188
65°	787	742	671	685	569	775
75°	316	293	276	262	289	338
85°	44	49	53	58	62	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3845.4	3845.4	3845.4	3845.4	3845.4
2.5°	3818.7	3818.7	3818.7	3814.2	3814.2
5°	3778.7	3774.2	3774.2	3769.8	3769.8
7.5°	3747.6	3743.1	3738.7	3734.2	3725.3
10°	3703.1	3703.1	3698.7	3676.4	3672.0
12.5°	3632.0	3627.5	3609.7	3578.6	3569.7
15°	3534.2	3534.2	3498.6	3463.0	3449.7
17.5°	3427.5	3423.0	3378.6	3343.0	3325.2
20°	3311.9	3303.0	3258.6	3200.8	3169.6
22.5°	3183.0	3183.0	3129.6	3054.1	3022.9
25°	3063.0	3045.2	2996.3	2889.6	2809.6
27.5°	2925.1	2898.5	2845.1	2694.0	2600.6
30°	2774.0	2760.7	2685.1	2489.5	2418.4
32.5°	2631.7	2609.5	2529.5	2325.0	2267.2
35°	2485.0	2467.3	2347.2	2169.4	2116.1
37.5°	2338.3	2316.1	2165.0	2022.7	1956.0
40°	2191.6	2165.0	2000.5	1871.6	1800.4
42.5°	2053.8	2018.3	1858.2	1720.4	1640.4
45°	1907.1	1867.1	1707.1	1564.8	1502.6
47.5°	1760.4	1724.9	1578.2	1431.5	1360.3
50°	1604.8	1573.7	1440.3	1293.6	1218.1
52.5°	1475.9	1427.0	1298.1	1151.4	1089.1
55°	1324.8	1284.8	1164.7	1026.9	973.6
57.5°	1186.9	1146.9	1035.8	906.9	862.4
60°	1058.0	1000.2	906.9	795.7	760.2
62.5°	915.8	871.3	791.3	697.9	742.4
65°	786.9	742.4	671.3	684.6	569.0
67.5°	644.6	622.4	560.1	497.9	480.1
70°	524.6	497.9	475.7	409.0	391.2
72.5°	417.9	391.2	360.1	324.5	311.2
75°	315.6	293.4	275.6	262.3	289.0
77.5°	217.8	208.9	195.6	182.3	177.8
80°	142.3	137.8	133.4	128.9	124.5
82.5°	84.5	84.5	84.5	84.5	84.5
85°	44.5	48.9	53.3	57.8	62.2
87.5°	26.7	26.7	31.1	35.6	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)