

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: P562506

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562506
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-LD4-2HI-35-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 7627.0 lumens
Efficiency: N/A
Efficacy: 88.3 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

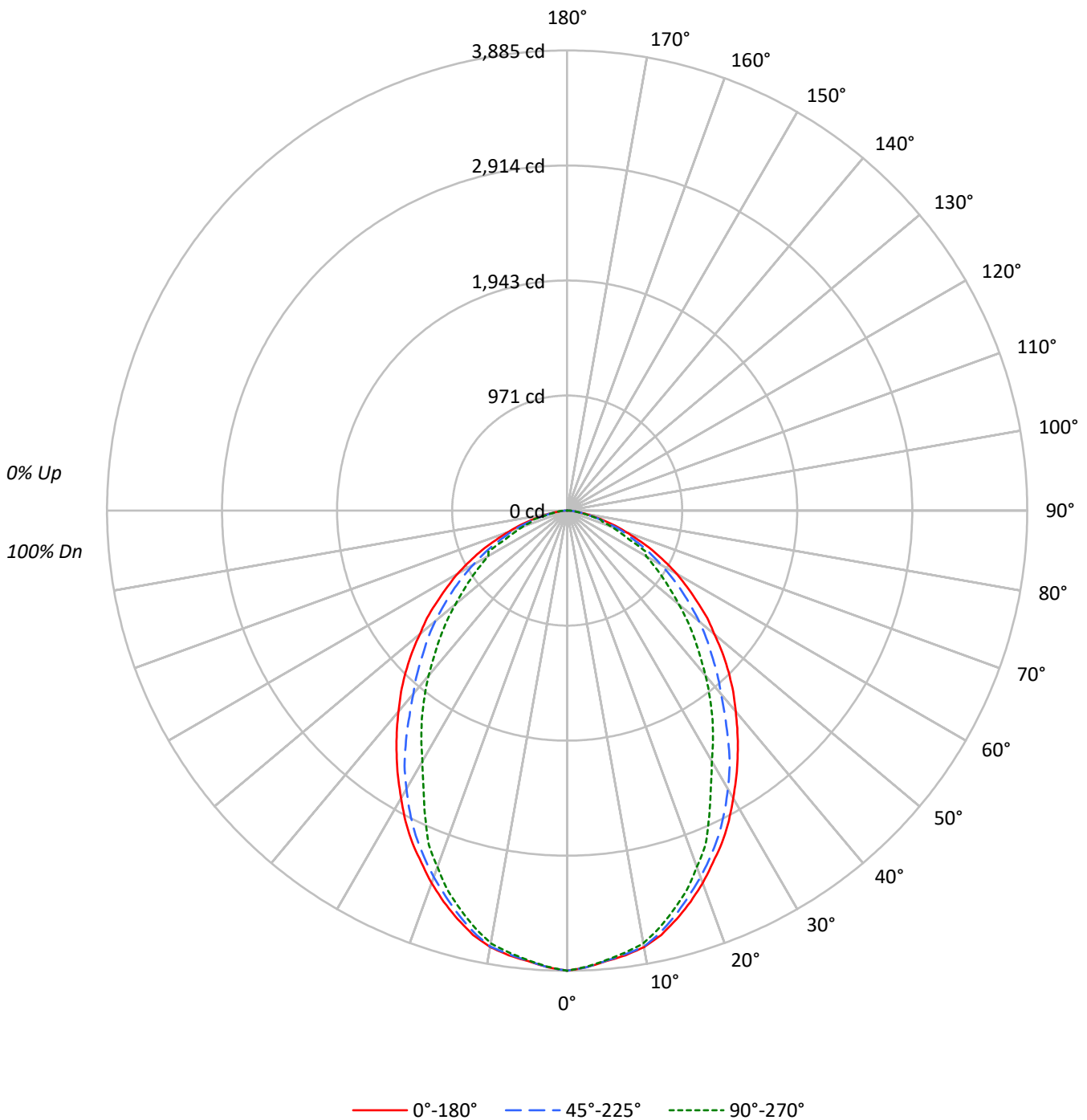
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5227	5227	5227
5°	5156	5150	5144
10°	5112	5106	5069
15°	4974	4924	4855
20°	4791	4714	4585
25°	4594	4494	4214
30°	4354	4215	3796
35°	4124	3895	3512
40°	3889	3550	3195
45°	3666	3282	2889
50°	3394	3046	2576
55°	3140	2761	2307
60°	2877	2466	2067
65°	2531	2159	1830
70°	2085	1891	1555
75°	1658	1448	1517
80°	1113	1044	975
85°	693	832	971

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3666 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.6	4.7
10°-20°	992.5	13.0
20°-30°	1374.1	18.0
30°-40°	1465.2	19.2
40°-50°	1336.7	17.5
50°-60°	1047.2	13.7
60°-70°	682.5	8.9
70°-80°	302.4	4.0
80°-90°	64.9	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°	2728.2	35.8
0°-40°	4193.4	55.0
0°-60°	6577.2	86.2
0°-90°	7627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3885	3885	3885	3885	3885	
5°	3818	3813	3813	3809	3809	362
15°	3571	3571	3535	3499	3485	1004
25°	3095	3077	3027	2919	2839	1421
35°	2511	2493	2372	2192	2138	1570
45°	1927	1886	1725	1581	1518	1484
55°	1338	1298	1177	1038	984	1200
65°	795	750	678	692	575	783
75°	319	296	278	265	292	342
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3885.1	3885.1	3885.1	3885.1	3885.1
2.5°	3858.1	3858.1	3858.1	3853.7	3853.7
5°	3817.7	3813.2	3813.2	3808.7	3808.7
7.5°	3786.3	3781.8	3777.3	3772.8	3763.8
10°	3741.4	3741.4	3736.9	3714.4	3709.9
12.5°	3669.5	3665.0	3647.0	3615.6	3606.6
15°	3570.7	3570.7	3534.8	3498.8	3485.4
17.5°	3462.9	3458.4	3413.5	3377.6	3359.6
20°	3346.1	3337.1	3292.2	3233.8	3202.4
22.5°	3215.9	3215.9	3162.0	3085.6	3054.2
25°	3094.6	3076.6	3027.2	2919.4	2838.6
27.5°	2955.4	2928.4	2874.5	2721.8	2627.5
30°	2802.7	2789.2	2712.8	2515.2	2443.3
32.5°	2658.9	2636.5	2555.6	2349.0	2290.6
35°	2510.7	2492.7	2371.5	2191.8	2137.9
37.5°	2362.5	2340.0	2187.3	2043.6	1976.2
40°	2214.3	2187.3	2021.1	1890.9	1819.0
42.5°	2075.0	2039.1	1877.4	1738.2	1657.3
45°	1926.8	1886.4	1724.7	1581.0	1518.1
47.5°	1778.6	1742.7	1594.5	1446.2	1374.4
50°	1621.4	1590.0	1455.2	1307.0	1230.7
52.5°	1491.2	1441.8	1311.5	1163.3	1100.4
55°	1338.4	1298.0	1176.8	1037.5	983.6
57.5°	1199.2	1158.8	1046.5	916.3	871.3
60°	1069.0	1010.6	916.3	804.0	768.0
62.5°	925.2	880.3	799.5	705.2	750.1
65°	795.0	750.1	678.2	691.7	574.9
67.5°	651.3	628.8	565.9	503.0	485.1
70°	530.0	503.0	480.6	413.2	395.2
72.5°	422.2	395.2	363.8	327.9	314.4
75°	318.9	296.4	278.5	265.0	291.9
77.5°	220.1	211.1	197.6	184.1	179.7
80°	143.7	139.2	134.7	130.3	125.8
82.5°	85.3	85.3	85.3	85.3	85.3
85°	44.9	49.4	53.9	58.4	62.9
87.5°	26.9	26.9	31.4	35.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)