

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: P590443

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590443
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3HI-35-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6619.0 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

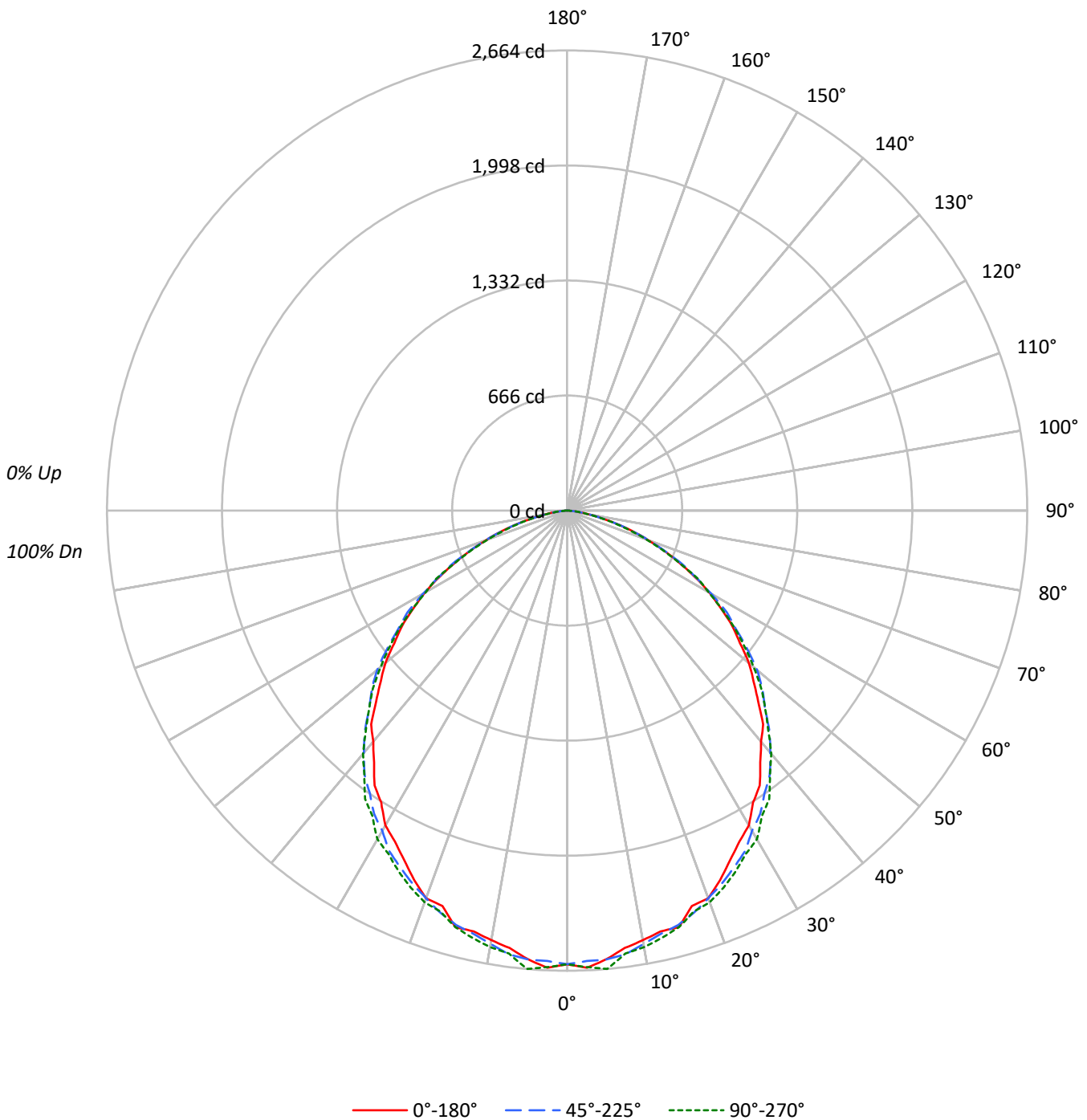
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7067	7067	7067
5°	7044	7047	7195
10°	6901	6961	7010
15°	6956	6918	6957
20°	6838	6838	6911
25°	6628	6773	6847
30°	6537	6652	6829
35°	6383	6550	6697
40°	6134	6430	6458
45°	5949	6161	6170
50°	5753	6013	5898
55°	5482	5589	5549
60°	5126	5177	5084
65°	4571	4688	4539
70°	3922	3936	3826
75°	3106	3099	2979
80°	2081	2022	1945
85°	1130	1121	1047

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6319 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.0	3.7
10°-20°	700.1	10.6
20°-30°	1049.0	15.8
30°-40°	1243.2	18.8
40°-50°	1245.5	18.8
50°-60°	1057.2	16.0
60°-70°	712.8	10.8
70°-80°	313.2	4.7
80°-90°	50.9	0.8
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°	1996.1	30.2
0°-40°	3239.3	48.9
0°-60°	5542.1	83.7
0°-90°	6619.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6619.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2626	2626	2626	2626	2626	
5°	2608	2602	2609	2601	2664	246
15°	2497	2468	2483	2496	2497	696
25°	2232	2244	2281	2311	2306	1032
35°	1943	1949	1994	2040	2039	1206
45°	1563	1592	1619	1660	1621	1209
55°	1168	1161	1191	1183	1183	1039
65°	718	708	736	708	713	714
75°	299	293	298	277	286	320
85°	37	36	36	35	34	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2626.3	2626.3	2626.3	2626.3	2626.3
2.5°	2649.0	2629.0	2610.3	2632.0	2645.2
5°	2607.6	2601.5	2608.6	2600.8	2663.6
7.5°	2554.0	2577.4	2591.0	2582.5	2586.2
10°	2525.5	2517.4	2547.6	2568.6	2565.6
12.5°	2495.0	2507.2	2508.9	2531.6	2533.7
15°	2496.7	2467.9	2483.2	2496.0	2497.1
17.5°	2399.7	2430.9	2441.4	2470.9	2434.3
20°	2387.9	2365.2	2387.9	2418.1	2413.3
22.5°	2315.0	2289.5	2338.4	2365.2	2363.5
25°	2232.2	2244.4	2281.1	2310.9	2306.2
27.5°	2159.7	2173.9	2226.1	2267.2	2240.7
30°	2103.7	2096.6	2140.7	2177.3	2197.6
32.5°	2003.7	2029.5	2081.0	2117.3	2097.9
35°	1943.0	1948.8	1993.8	2040.0	2038.6
37.5°	1836.9	1863.6	1927.0	1939.9	1928.1
40°	1746.3	1773.1	1830.4	1844.3	1838.5
42.5°	1679.5	1684.3	1733.4	1749.4	1723.9
45°	1563.2	1592.4	1618.8	1660.5	1621.2
47.5°	1464.2	1477.8	1534.7	1545.9	1525.2
50°	1374.3	1379.1	1436.4	1422.5	1408.9
52.5°	1261.4	1281.4	1313.6	1310.9	1295.0
55°	1168.5	1160.7	1191.2	1183.1	1182.7
57.5°	1056.9	1070.5	1095.6	1082.7	1062.0
60°	952.5	952.8	962.0	947.4	944.7
62.5°	836.2	840.3	842.3	824.3	853.5
65°	717.9	708.4	736.2	708.0	712.8
67.5°	609.0	613.8	611.0	593.4	600.2
70°	498.5	504.6	500.2	480.2	486.3
72.5°	397.4	390.0	394.7	369.6	381.1
75°	298.7	292.6	298.1	277.0	286.5
77.5°	203.5	208.2	204.8	193.6	200.1
80°	134.3	130.5	130.5	124.1	125.5
82.5°	78.3	74.6	73.6	71.5	74.6
85°	36.6	35.6	36.3	35.3	33.9
87.5°	13.2	13.6	13.6	12.9	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)