

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: P590514

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590514
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-50-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

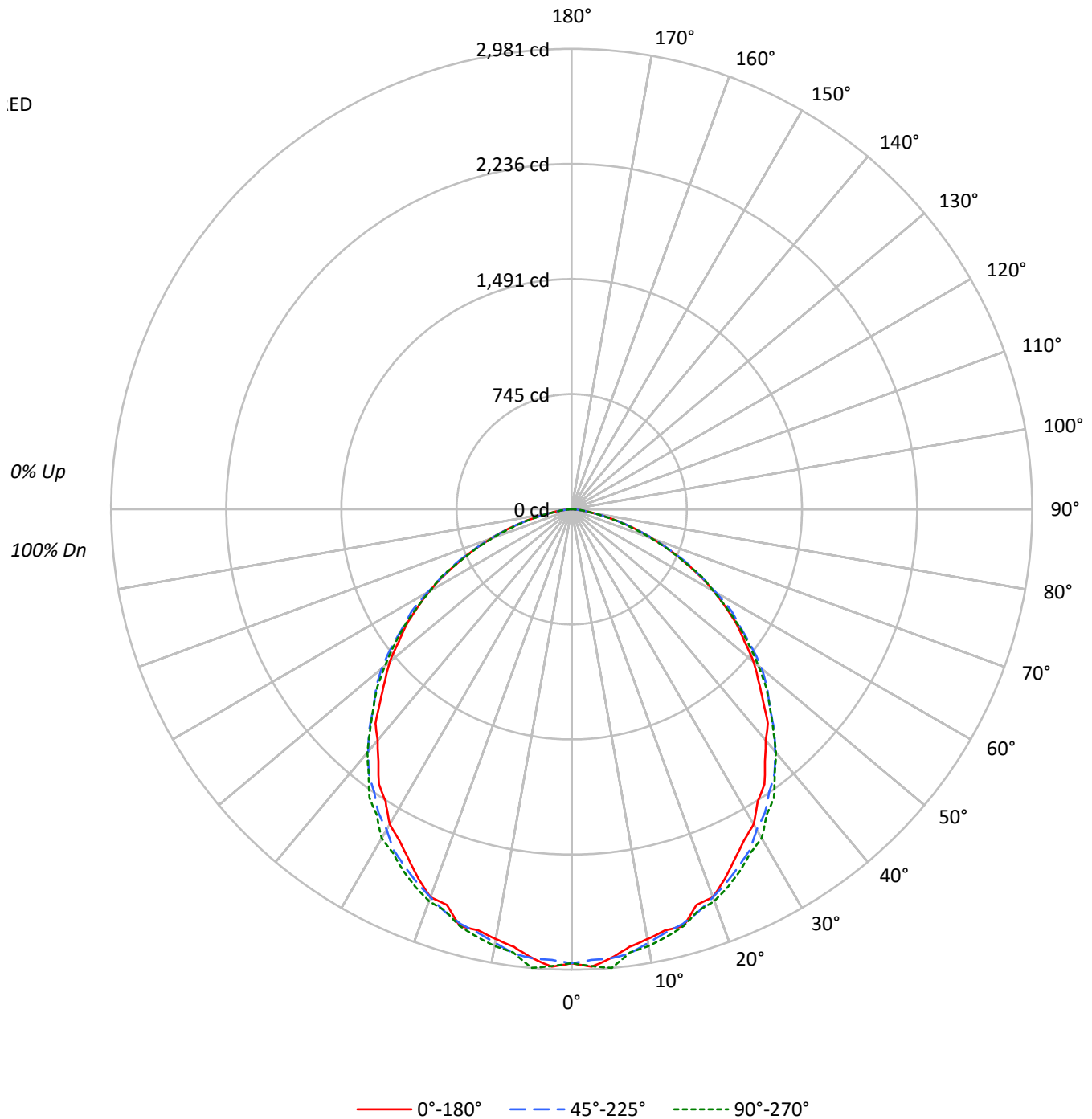
Lumens per Lamp: N/A
Luminaire Lumens: 7407.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	7909	7909	7909
5°	7882	7886	8052
10°	7723	7790	7845
15°	7784	7741	7785
20°	7652	7652	7734
25°	7417	7579	7663
30°	7315	7443	7642
35°	7143	7330	7494
40°	6865	7195	7227
45°	6657	6894	6904
50°	6438	6729	6601
55°	6135	6254	6210
60°	5737	5794	5690
65°	5115	5245	5079
70°	4389	4404	4281
75°	3476	3467	3333
80°	2329	2264	2176
85°	1266	1254	1170

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7072 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.4	3.7
10°-20°	783.5	10.6
20°-30°	1173.8	15.8
30°-40°	1391.2	18.8
40°-50°	1393.8	18.8
50°-60°	1183.1	16.0
60°-70°	797.6	10.8
70°-80°	350.5	4.7
80°-90°	57.0	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°	2233.8	30.2
0°-40°	3625.0	48.9
0°-60°	6201.9	83.7
0°-90°	7407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7407.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2939	2939	2939	2939	2939	
5°	2918	2911	2919	2910	2981	275
15°	2794	2762	2779	2793	2794	778
25°	2498	2512	2553	2586	2581	1155
35°	2174	2181	2231	2283	2281	1350
45°	1749	1782	1812	1858	1814	1353
55°	1308	1299	1333	1324	1324	1163
65°	803	793	824	792	798	799
75°	334	328	334	310	321	358
85°	41	40	41	40	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2938.9	2938.9	2938.9	2938.9	2938.9
2.5°	2964.3	2941.9	2921.1	2945.4	2960.2
5°	2918.0	2911.2	2919.2	2910.5	2980.7
7.5°	2858.1	2884.3	2899.4	2890.0	2894.1
10°	2826.2	2817.1	2850.9	2874.4	2871.0
12.5°	2792.1	2805.7	2807.6	2833.0	2835.3
15°	2794.0	2761.7	2778.8	2793.2	2794.3
17.5°	2685.4	2720.3	2732.1	2765.1	2724.1
20°	2672.2	2646.7	2672.2	2705.9	2700.6
22.5°	2590.6	2562.1	2616.7	2646.7	2644.8
25°	2498.0	2511.6	2552.6	2586.0	2580.7
27.5°	2416.8	2432.7	2491.1	2537.1	2507.5
30°	2354.2	2346.2	2395.5	2436.5	2459.3
32.5°	2242.2	2271.1	2328.7	2369.3	2347.7
35°	2174.3	2180.8	2231.2	2282.8	2281.3
37.5°	2055.5	2085.5	2156.5	2170.9	2157.6
40°	1954.2	1984.2	2048.3	2063.9	2057.4
42.5°	1879.5	1884.8	1939.8	1957.6	1929.2
45°	1749.3	1781.9	1811.5	1858.2	1814.2
47.5°	1638.5	1653.7	1717.4	1730.0	1706.8
50°	1537.9	1543.3	1607.4	1591.8	1576.7
52.5°	1411.6	1434.0	1470.0	1467.0	1449.2
55°	1307.6	1298.9	1333.0	1323.9	1323.6
57.5°	1182.8	1198.0	1226.0	1211.6	1188.5
60°	1065.9	1066.3	1076.5	1060.2	1057.2
62.5°	935.7	940.3	942.6	922.5	955.1
65°	803.3	792.7	823.8	792.3	797.6
67.5°	681.5	686.8	683.8	664.1	671.6
70°	557.8	564.6	559.7	537.3	544.1
72.5°	444.7	436.4	441.7	413.6	426.5
75°	334.3	327.5	333.5	310.0	320.6
77.5°	227.7	233.0	229.2	216.7	223.9
80°	150.3	146.1	146.1	138.9	140.4
82.5°	87.7	83.5	82.3	80.1	83.5
85°	41.0	39.8	40.6	39.5	37.9
87.5°	14.8	15.2	15.2	14.4	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)