

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: P590426

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-80-94-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590426  
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-80-94-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

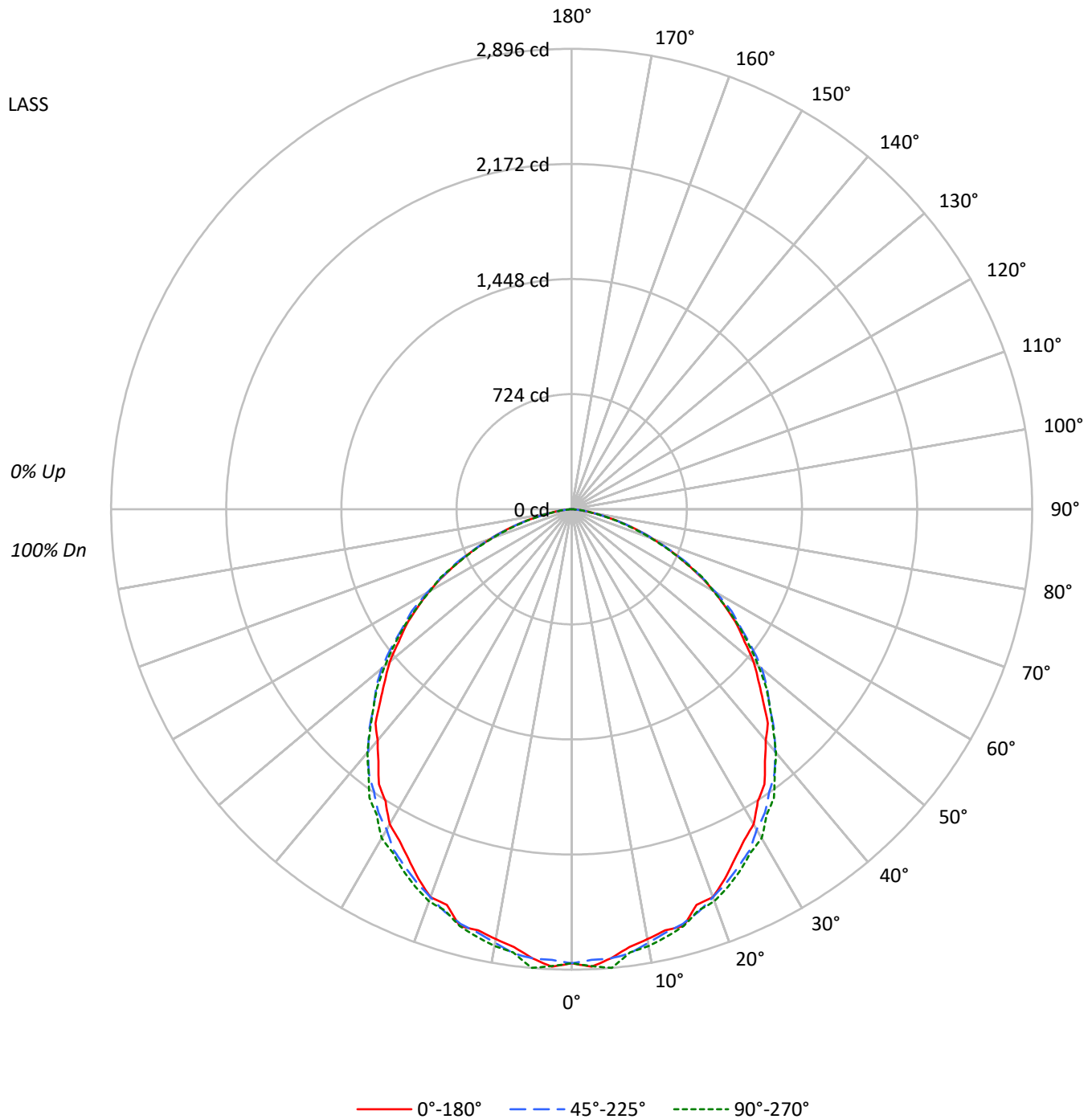
Lumens per Lamp: N/A  
Luminaire Lumens: 7196.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.8  
Input Voltage (V):  
Input Current (Ain): NR  
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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7683	7683	7683
5°	7658	7661	7822
10°	7503	7568	7621
15°	7562	7521	7563
20°	7434	7434	7513
25°	7206	7363	7444
30°	7107	7232	7424
35°	6939	7121	7281
40°	6669	6991	7021
45°	6468	6698	6707
50°	6255	6538	6412
55°	5960	6076	6032
60°	5573	5629	5528
65°	4969	5096	4934
70°	4264	4279	4159
75°	3377	3369	3239
80°	2263	2199	2114
85°	1229	1216	1139

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 6870 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	268.6	3.7
10°-20°	761.2	10.6
20°-30°	1140.4	15.8
30°-40°	1351.6	18.8
40°-50°	1354.1	18.8
50°-60°	1149.4	16.0
60°-70°	774.9	10.8
70°-80°	340.5	4.7
80°-90°	55.3	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°	2170.1	30.2
0°-40°	3521.7	48.9
0°-60°	6025.2	83.7
0°-90°	7196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7196.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2855	2855	2855	2855	2855	
5°	2835	2828	2836	2828	2896	267
15°	2714	2683	2700	2714	2715	756
25°	2427	2440	2480	2512	2507	1122
35°	2112	2119	2168	2218	2216	1312
45°	1700	1731	1760	1805	1762	1315
55°	1270	1262	1295	1286	1286	1130
65°	780	770	800	770	775	776
75°	325	318	324	301	312	348
85°	40	39	39	38	37	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2855.2	2855.2	2855.2	2855.2	2855.2
2.5°	2879.9	2858.1	2837.9	2861.5	2875.8
5°	2834.9	2828.3	2836.0	2827.5	2895.7
7.5°	2776.7	2802.1	2816.9	2807.6	2811.7
10°	2745.7	2736.9	2769.7	2792.5	2789.2
12.5°	2712.5	2725.8	2727.6	2752.3	2754.5
15°	2714.4	2683.0	2699.6	2713.6	2714.7
17.5°	2608.9	2642.8	2654.3	2686.3	2646.5
20°	2596.0	2571.3	2596.0	2628.8	2623.7
22.5°	2516.8	2489.1	2542.2	2571.3	2569.5
25°	2426.8	2440.1	2479.9	2512.3	2507.2
27.5°	2347.9	2363.4	2420.2	2464.8	2436.0
30°	2287.1	2279.4	2327.3	2367.1	2389.2
32.5°	2178.4	2206.4	2262.4	2301.8	2280.8
35°	2112.4	2118.6	2167.7	2217.8	2216.3
37.5°	1997.0	2026.1	2095.0	2109.0	2096.1
40°	1898.5	1927.7	1990.0	2005.1	1998.8
42.5°	1825.9	1831.1	1884.5	1901.9	1874.2
45°	1699.5	1731.2	1759.9	1805.3	1762.5
47.5°	1591.8	1606.6	1668.5	1680.7	1658.2
50°	1494.1	1499.3	1561.6	1546.5	1531.7
52.5°	1371.4	1393.1	1428.1	1425.2	1407.9
55°	1270.4	1261.9	1295.1	1286.2	1285.8
57.5°	1149.1	1163.8	1191.1	1177.1	1154.6
60°	1035.5	1035.9	1045.9	1030.0	1027.1
62.5°	909.1	913.5	915.7	896.2	927.9
65°	780.4	770.1	800.3	769.7	774.9
67.5°	662.1	667.3	664.3	645.1	652.5
70°	541.9	548.6	543.8	522.0	528.6
72.5°	432.1	423.9	429.1	401.8	414.4
75°	324.8	318.1	324.0	301.2	311.5
77.5°	221.2	226.4	222.7	210.5	217.5
80°	146.0	141.9	141.9	134.9	136.4
82.5°	85.2	81.1	80.0	77.8	81.1
85°	39.8	38.7	39.4	38.3	36.9
87.5°	14.4	14.7	14.7	14.0	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)