

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: P562908

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562908  
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-35-UNV-82-96-EDD-90  
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

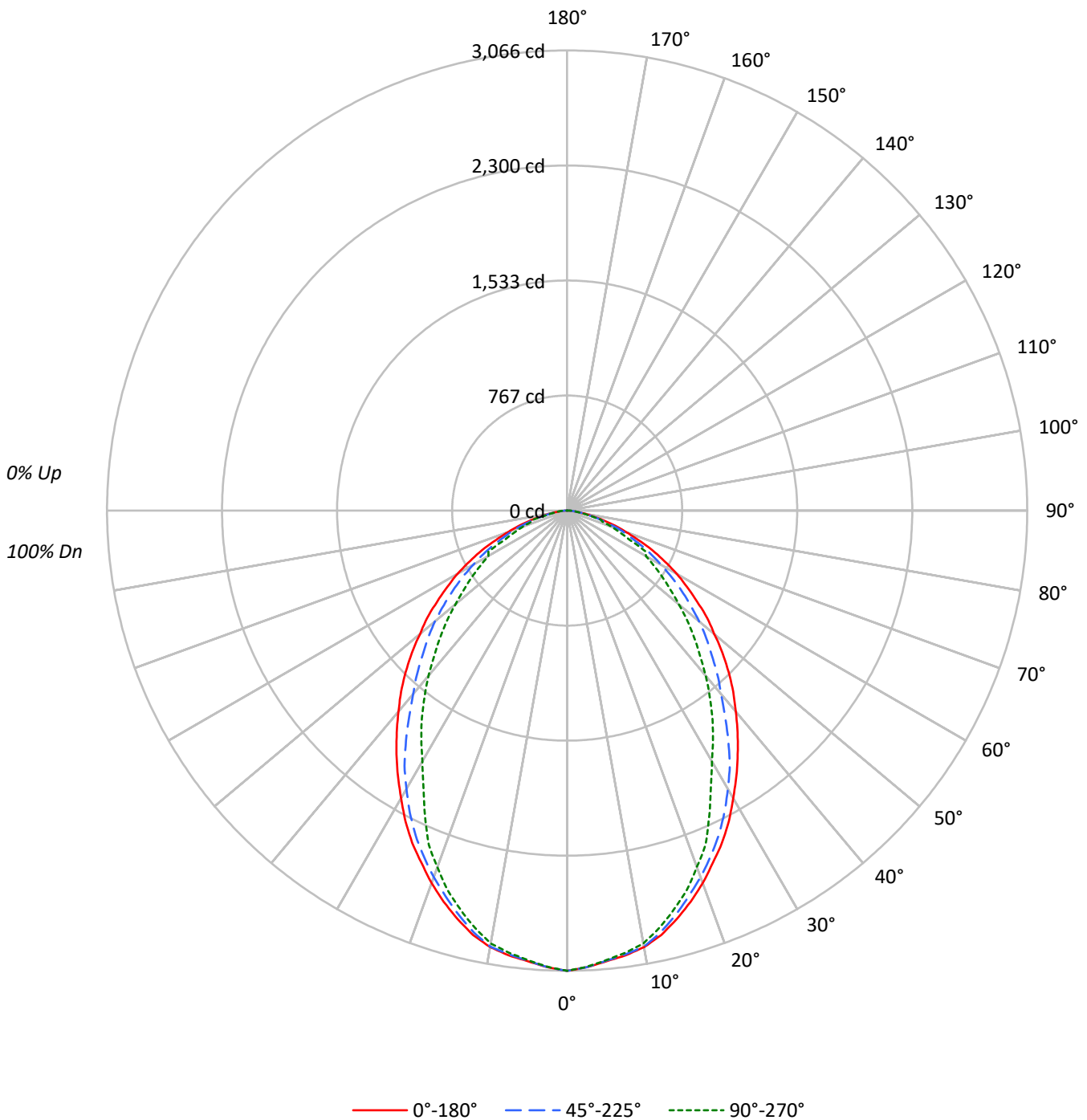
Lumens per Lamp: N/A  
Luminaire Lumens: 6020.0 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4126	4126	4126
5°	4070	4065	4060
10°	4035	4030	4001
15°	3926	3886	3832
20°	3782	3721	3619
25°	3626	3547	3326
30°	3437	3327	2996
35°	3255	3075	2772
40°	3070	2802	2522
45°	2894	2590	2280
50°	2679	2404	2033
55°	2478	2179	1821
60°	2270	1946	1631
65°	1998	1704	1445
70°	1646	1492	1227
75°	1308	1143	1198
80°	879	824	769
85°	548	656	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2894 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.5	4.7
10°-20°	783.4	13.0
20°-30°	1084.6	18.0
30°-40°	1156.5	19.2
40°-50°	1055.0	17.5
50°-60°	826.5	13.7
60°-70°	538.7	8.9
70°-80°	238.7	4.0
80°-90°	51.3	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°	2153.4	35.8
0°-40°	3309.9	55.0
0°-60°	5191.4	86.2
0°-90°	6020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6020.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3066	3066	3066	3066	3066	
5°	3013	3010	3010	3006	3006	286
15°	2818	2818	2790	2762	2751	792
25°	2443	2428	2389	2304	2240	1121
35°	1982	1968	1872	1730	1688	1239
45°	1521	1489	1361	1248	1198	1171
55°	1056	1024	929	819	776	948
65°	628	592	535	546	454	618
75°	252	234	220	209	230	270
85°	36	39	42	46	50	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3066.5	3066.5	3066.5	3066.5	3066.5
2.5°	3045.2	3045.2	3045.2	3041.7	3041.7
5°	3013.3	3009.8	3009.8	3006.2	3006.2
7.5°	2988.5	2985.0	2981.4	2977.9	2970.8
10°	2953.1	2953.1	2949.5	2931.8	2928.2
12.5°	2896.3	2892.8	2878.6	2853.8	2846.7
15°	2818.4	2818.4	2790.0	2761.6	2751.0
17.5°	2733.3	2729.7	2694.3	2665.9	2651.7
20°	2641.1	2634.0	2598.6	2552.5	2527.7
22.5°	2538.3	2538.3	2495.7	2435.5	2410.7
25°	2442.6	2428.4	2389.4	2304.3	2240.5
27.5°	2332.7	2311.4	2268.9	2148.3	2073.9
30°	2212.1	2201.5	2141.2	1985.3	1928.5
32.5°	2098.7	2081.0	2017.2	1854.1	1808.0
35°	1981.7	1967.5	1871.8	1730.0	1687.5
37.5°	1864.7	1847.0	1726.5	1613.0	1559.8
40°	1747.7	1726.5	1595.3	1492.5	1435.8
42.5°	1637.8	1609.5	1481.8	1372.0	1308.1
45°	1520.8	1488.9	1361.3	1247.9	1198.2
47.5°	1403.9	1375.5	1258.5	1141.5	1084.8
50°	1279.8	1255.0	1148.6	1031.6	971.4
52.5°	1177.0	1138.0	1035.2	918.2	868.5
55°	1056.4	1024.5	928.8	818.9	776.4
57.5°	946.5	914.6	826.0	723.2	687.7
60°	843.7	797.6	723.2	634.6	606.2
62.5°	730.3	694.8	631.0	556.6	592.0
65°	627.5	592.0	535.3	545.9	453.8
67.5°	514.0	496.3	446.7	397.1	382.9
70°	418.3	397.1	379.3	326.1	312.0
72.5°	333.2	312.0	287.2	258.8	248.2
75°	251.7	234.0	219.8	209.2	230.4
77.5°	173.7	166.6	156.0	145.3	141.8
80°	113.4	109.9	106.4	102.8	99.3
82.5°	67.4	67.4	67.4	67.4	67.4
85°	35.5	39.0	42.5	46.1	49.6
87.5°	21.3	21.3	24.8	28.4	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)