

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: P590043

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-80-96-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590043  
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-LD4-1STD-35-UNV-80-96-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

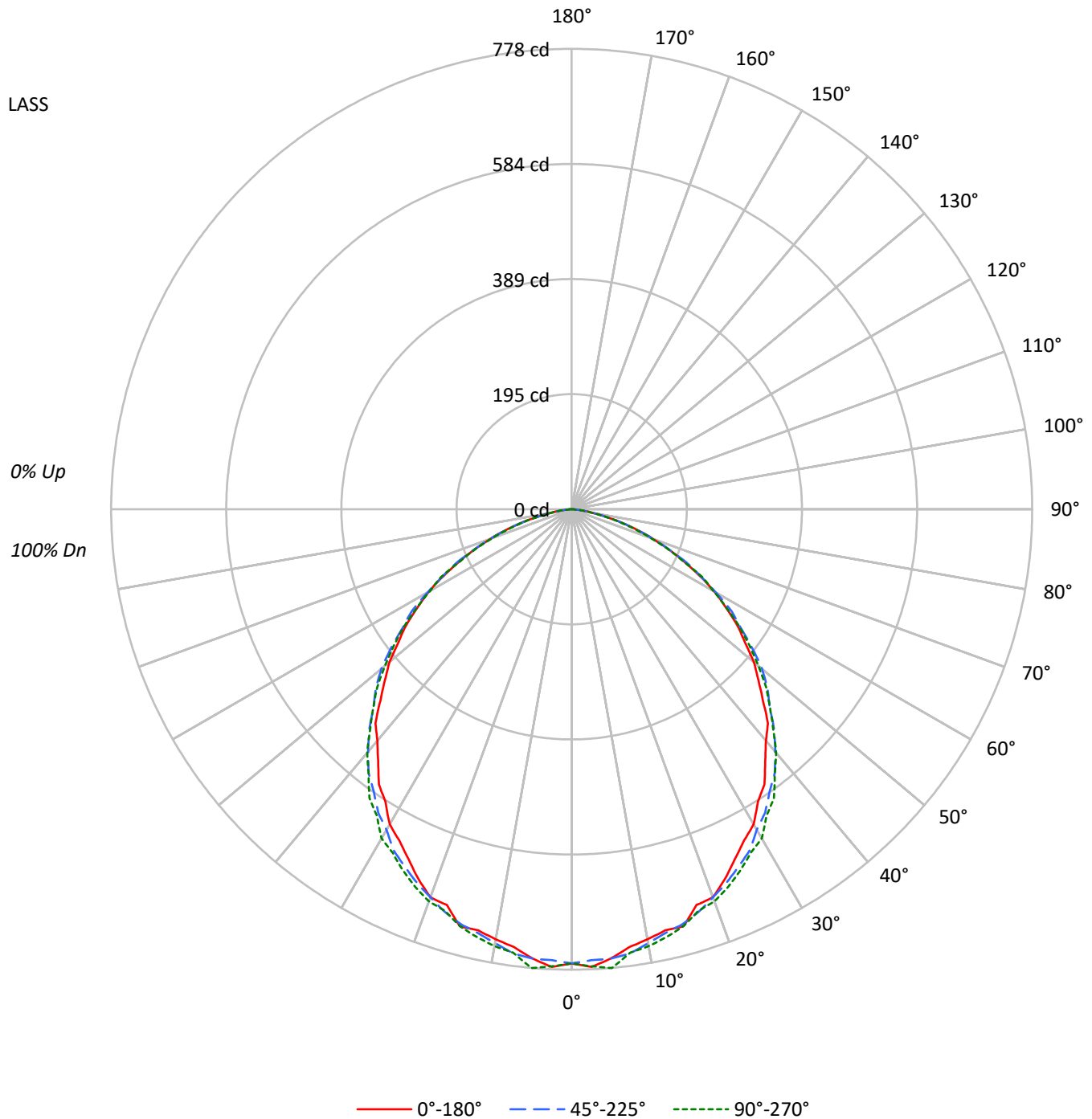
Lumens per Lamp: N/A  
Luminaire Lumens: 1934.0 lumens  
Efficiency: N/A  
Efficacy: 116.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	2065	2065	2065
5°	2058	2059	2102
10°	2016	2034	2048
15°	2032	2021	2033
20°	1998	1998	2019
25°	1936	1979	2001
30°	1910	1944	1995
35°	1865	1914	1957
40°	1793	1879	1887
45°	1738	1800	1803
50°	1681	1757	1724
55°	1602	1633	1621
60°	1498	1513	1485
65°	1335	1370	1326
70°	1146	1149	1118
75°	908	906	870
80°	607	590	569
85°	330	327	306

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 1846 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	3.7
10°-20°	204.6	10.6
20°-30°	306.5	15.8
30°-40°	363.3	18.8
40°-50°	363.9	18.8
50°-60°	308.9	16.0
60°-70°	208.3	10.8
70°-80°	91.5	4.7
80°-90°	14.9	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°	583.2	30.2
0°-40°	946.5	48.9
0°-60°	1619.3	83.7
0°-90°	1934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1934.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	762	760	762	760	778	72
15°	730	721	726	729	730	203
25°	652	656	666	675	674	302
35°	568	569	583	596	596	352
45°	457	465	473	485	474	353
55°	341	339	348	346	346	304
65°	210	207	215	207	208	209
75°	87	86	87	81	84	94
85°	11	10	11	10	10	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	767.4	767.4	767.4	767.4	767.4
2.5°	774.0	768.2	762.7	769.0	772.9
5°	761.9	760.1	762.2	759.9	778.3
7.5°	746.3	753.1	757.1	754.6	755.7
10°	737.9	735.6	744.4	750.5	749.6
12.5°	729.0	732.6	733.1	739.7	740.3
15°	729.5	721.1	725.6	729.3	729.6
17.5°	701.2	710.3	713.4	722.0	711.3
20°	697.7	691.1	697.7	706.5	705.1
22.5°	676.4	669.0	683.2	691.1	690.6
25°	652.2	655.8	666.5	675.2	673.8
27.5°	631.0	635.2	650.4	662.4	654.7
30°	614.7	612.6	625.5	636.2	642.1
32.5°	585.5	593.0	608.0	618.6	613.0
35°	567.7	569.4	582.6	596.1	595.7
37.5°	536.7	544.5	563.1	566.8	563.4
40°	510.3	518.1	534.8	538.9	537.2
42.5°	490.7	492.1	506.5	511.1	503.7
45°	456.8	465.3	473.0	485.2	473.7
47.5°	427.8	431.8	448.4	451.7	445.7
50°	401.6	403.0	419.7	415.6	411.7
52.5°	368.6	374.4	383.8	383.0	378.4
55°	341.4	339.1	348.1	345.7	345.6
57.5°	308.8	312.8	320.1	316.4	310.3
60°	278.3	278.4	281.1	276.8	276.0
62.5°	244.3	245.5	246.1	240.9	249.4
65°	209.7	207.0	215.1	206.9	208.3
67.5°	177.9	179.3	178.5	173.4	175.4
70°	145.6	147.4	146.1	140.3	142.1
72.5°	116.1	113.9	115.3	108.0	111.4
75°	87.3	85.5	87.1	80.9	83.7
77.5°	59.4	60.8	59.8	56.6	58.5
80°	39.2	38.1	38.1	36.3	36.7
82.5°	22.9	21.8	21.5	20.9	21.8
85°	10.7	10.4	10.6	10.3	9.9
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)