

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: P563132

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563132  
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-LD4-3HI-40-UNV-80-96-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

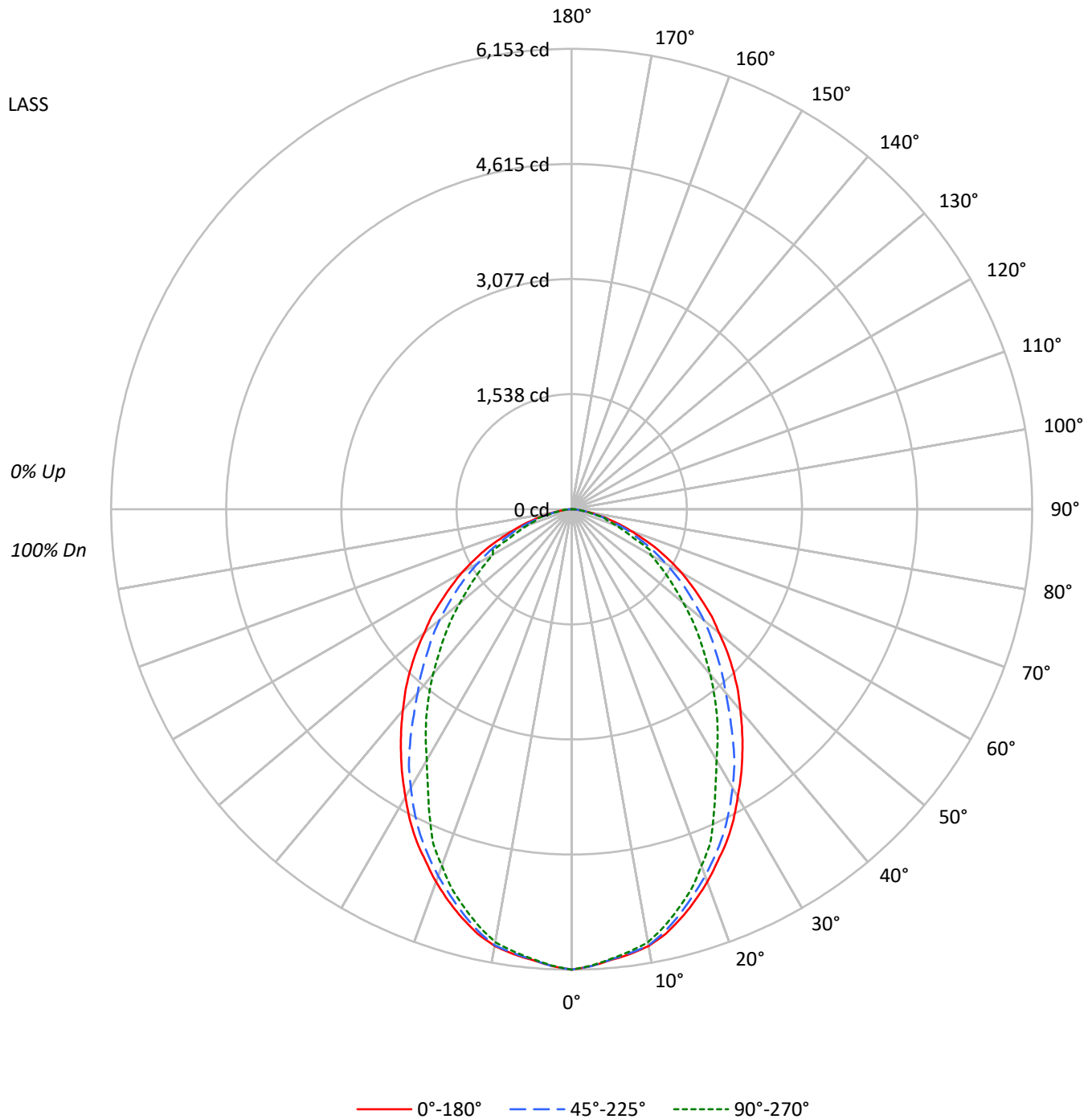
Lumens per Lamp: N/A  
Luminaire Lumens: 12079.0 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 129.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77				75	
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67				65	
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58				56	
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52				50	
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46				44	
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42				40	
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38				36	
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34				33	
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32				30	

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

	0°	45°	90°
0°	8279	8279	8279
5°	8166	8157	8147
10°	8095	8086	8027
15°	7877	7798	7689
20°	7588	7465	7262
25°	7276	7118	6674
30°	6896	6675	6012
35°	6531	6169	5561
40°	6159	5622	5060
45°	5806	5198	4575
50°	5375	4824	4080
55°	4972	4372	3654
60°	4556	3905	3273
65°	4008	3420	2899
70°	3302	2994	2463
75°	2625	2293	2404
80°	1764	1654	1543
85°	1098	1318	1538

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5806 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	572.8	4.7
10°-20°	1571.9	13.0
20°-30°	2176.1	18.0
30°-40°	2320.4	19.2
40°-50°	2116.9	17.5
50°-60°	1658.4	13.7
60°-70°	1080.9	8.9
70°-80°	478.9	4.0
80°-90°	102.8	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°	4320.8	35.8
0°-40°	6641.2	55.0
0°-60°	10416.4	86.2
0°-90°	12079.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12079.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6153	6153	6153	6153	6153	
5°	6046	6039	6039	6032	6032	574
15°	5655	5655	5598	5541	5520	1590
25°	4901	4872	4794	4624	4496	2250
35°	3976	3948	3756	3471	3386	2486
45°	3052	2988	2732	2504	2404	2351
55°	2120	2056	1864	1643	1558	1901
65°	1259	1188	1074	1095	910	1241
75°	505	470	441	420	462	541
85°	71	78	85	92	100	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6152.9	6152.9	6152.9	6152.9	6152.9
2.5°	6110.2	6110.2	6110.2	6103.1	6103.1
5°	6046.2	6039.1	6039.1	6032.0	6032.0
7.5°	5996.4	5989.3	5982.2	5975.1	5960.8
10°	5925.3	5925.3	5918.1	5882.6	5875.5
12.5°	5811.4	5804.3	5775.9	5726.1	5711.9
15°	5655.0	5655.0	5598.1	5541.1	5519.8
17.5°	5484.2	5477.1	5406.0	5349.1	5320.6
20°	5299.3	5285.1	5213.9	5121.5	5071.7
22.5°	5093.0	5093.0	5007.7	4886.7	4836.9
25°	4901.0	4872.5	4794.3	4623.6	4495.5
27.5°	4680.5	4637.8	4552.4	4310.6	4161.2
30°	4438.6	4417.3	4296.3	3983.4	3869.6
32.5°	4211.0	4175.4	4047.4	3720.2	3627.7
35°	3976.3	3947.8	3755.7	3471.2	3385.9
37.5°	3741.5	3706.0	3464.1	3236.5	3129.8
40°	3506.8	3464.1	3200.9	2994.6	2880.8
42.5°	3286.3	3229.4	2973.3	2752.8	2624.8
45°	3051.5	2987.5	2731.5	2503.8	2404.2
47.5°	2816.8	2759.9	2525.2	2290.4	2176.6
50°	2567.8	2518.1	2304.7	2069.9	1949.0
52.5°	2361.6	2283.3	2077.0	1842.3	1742.7
55°	2119.7	2055.7	1863.6	1643.1	1557.8
57.5°	1899.2	1835.2	1657.4	1451.1	1380.0
60°	1692.9	1600.5	1451.1	1273.3	1216.3
62.5°	1465.3	1394.2	1266.1	1116.8	1187.9
65°	1259.0	1187.9	1074.1	1095.4	910.5
67.5°	1031.4	995.8	896.3	796.7	768.2
70°	839.4	796.7	761.1	654.4	626.0
72.5°	668.6	626.0	576.2	519.3	497.9
75°	505.0	469.5	441.0	419.7	462.4
77.5°	348.5	334.3	313.0	291.6	284.5
80°	227.6	220.5	213.4	206.3	199.2
82.5°	135.1	135.1	135.1	135.1	135.1
85°	71.1	78.2	85.4	92.5	99.6
87.5°	42.7	42.7	49.8	56.9	64.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)