

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: P563067

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563067  
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-35-UNV-80-94-EDD  
Description: 2X4 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**

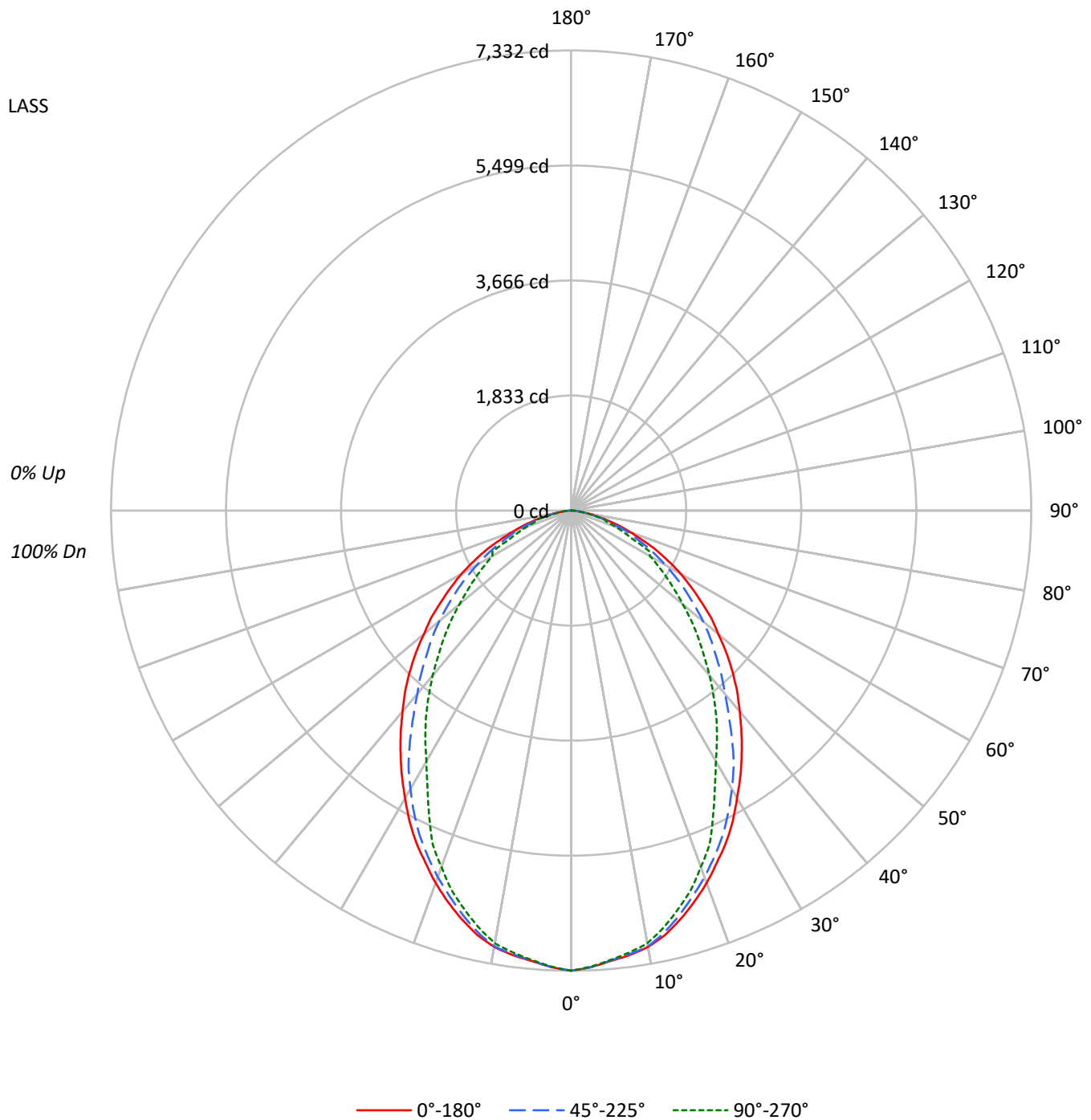
Lumens per Lamp: N/A  
Luminaire Lumens: 14393.0 lumens  
Efficiency: N/A  
Efficacy: 111.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 129.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9865	9865	9865
5°	9731	9719	9708
10°	9646	9635	9565
15°	9386	9292	9162
20°	9041	8896	8653
25°	8670	8481	7952
30°	8217	7954	7164
35°	7782	7351	6627
40°	7339	6699	6029
45°	6919	6193	5451
50°	6405	5748	4861
55°	5925	5209	4354
60°	5429	4653	3900
65°	4776	4075	3454
70°	3934	3568	2934
75°	3129	2732	2864
80°	2101	1970	1839
85°	1309	1570	1832

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6919 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	682.5	4.7
10°-20°	1873.0	13.0
20°-30°	2593.0	18.0
30°-40°	2764.9	19.2
40°-50°	2522.4	17.5
50°-60°	1976.1	13.7
60°-70°	1287.9	8.9
70°-80°	570.6	4.0
80°-90°	122.5	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°	5148.5	35.8
0°-40°	7913.4	55.0
0°-60°	12411.9	86.2
0°-90°	14393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14393.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7332	7332	7332	7332	7332	
5°	7204	7196	7196	7188	7188	684
15°	6738	6738	6670	6603	6577	1894
25°	5840	5806	5713	5509	5357	2681
35°	4738	4704	4475	4136	4034	2962
45°	3636	3560	3255	2984	2865	2801
55°	2526	2450	2221	1958	1856	2265
65°	1500	1416	1280	1305	1085	1478
75°	602	559	526	500	551	645
85°	85	93	102	110	119	118
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7331.6	7331.6	7331.6	7331.6	7331.6
2.5°	7280.7	7280.7	7280.7	7272.3	7272.3
5°	7204.5	7196.0	7196.0	7187.5	7187.5
7.5°	7145.1	7136.7	7128.2	7119.7	7102.8
10°	7060.4	7060.4	7051.9	7009.5	7001.0
12.5°	6924.8	6916.3	6882.4	6823.1	6806.1
15°	6738.3	6738.3	6670.5	6602.7	6577.3
17.5°	6534.9	6526.4	6441.6	6373.8	6339.9
20°	6314.5	6297.5	6212.8	6102.6	6043.3
22.5°	6068.7	6068.7	5967.0	5822.9	5763.6
25°	5839.9	5806.0	5712.7	5509.3	5356.7
27.5°	5577.1	5526.2	5424.5	5136.4	4958.4
30°	5288.9	5263.5	5119.4	4746.5	4610.9
32.5°	5017.7	4975.3	4822.8	4432.9	4322.7
35°	4738.0	4704.1	4475.2	4136.2	4034.5
37.5°	4458.3	4415.9	4127.7	3856.5	3729.4
40°	4178.6	4127.7	3814.1	3568.3	3432.7
42.5°	3915.8	3848.0	3542.9	3280.2	3127.6
45°	3636.1	3559.9	3254.7	2983.5	2864.8
47.5°	3356.4	3288.6	3008.9	2729.2	2593.6
50°	3059.8	3000.4	2746.2	2466.5	2322.4
52.5°	2814.0	2720.7	2474.9	2195.2	2076.6
55°	2525.8	2449.5	2220.7	1957.9	1856.2
57.5°	2263.0	2186.8	1974.9	1729.1	1644.3
60°	2017.3	1907.1	1729.1	1517.2	1449.4
62.5°	1746.0	1661.3	1508.7	1330.7	1415.5
65°	1500.2	1415.5	1279.9	1305.3	1084.9
67.5°	1229.0	1186.6	1068.0	949.3	915.4
70°	1000.1	949.3	906.9	779.8	745.9
72.5°	796.7	745.9	686.5	618.7	593.3
75°	601.8	559.4	525.5	500.1	550.9
77.5°	415.3	398.4	372.9	347.5	339.0
80°	271.2	262.8	254.3	245.8	237.3
82.5°	161.0	161.0	161.0	161.0	161.0
85°	84.8	93.2	101.7	110.2	118.7
87.5°	50.9	50.9	59.3	67.8	76.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)