

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: P590074

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-80-94-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590074  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

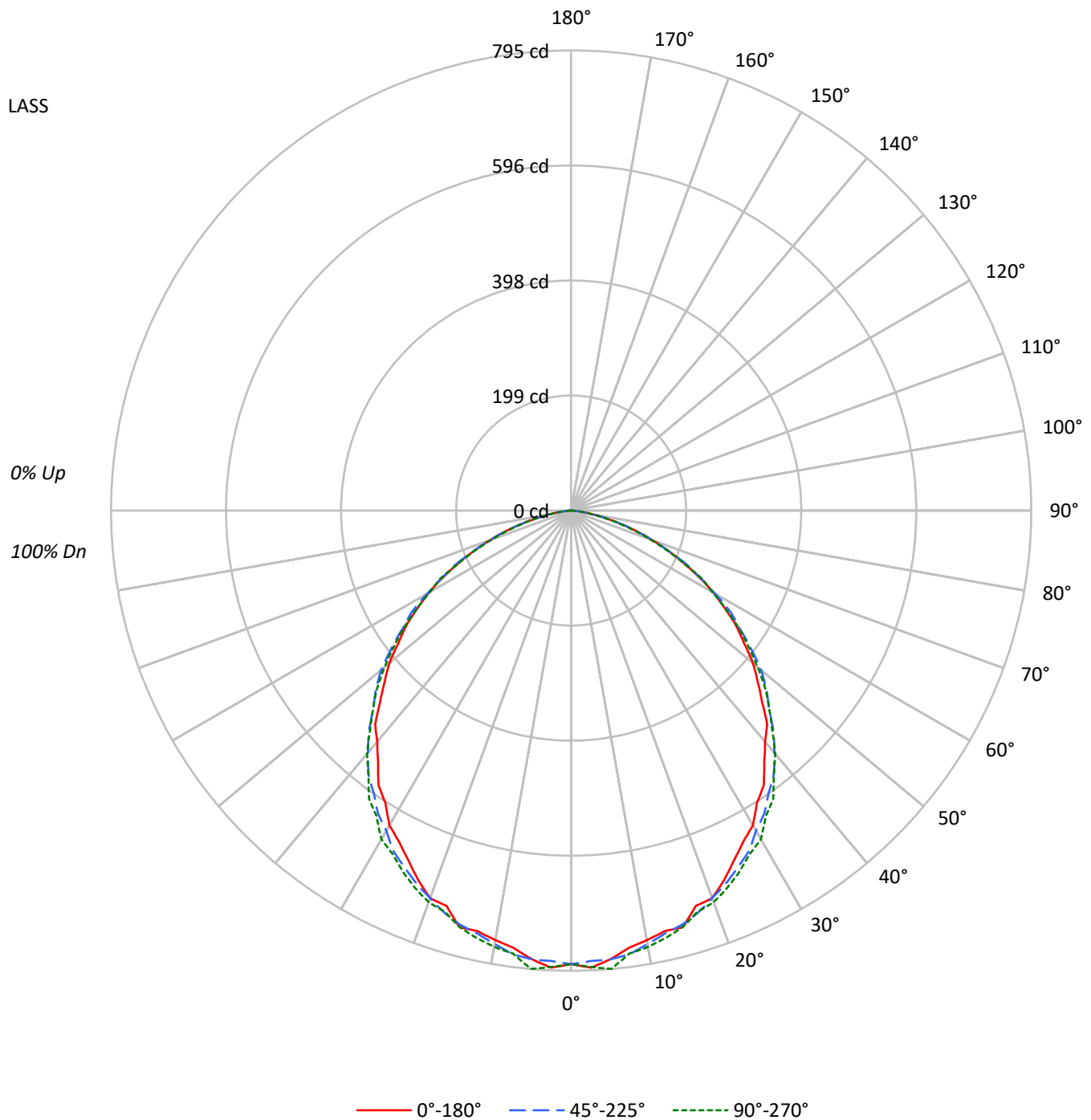
Lumens per Lamp: N/A  
Luminaire Lumens: 1975.0 lumens  
Efficiency: N/A  
Efficacy: 119.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
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°	2109	2109	2109
5°	2102	2103	2147
10°	2059	2077	2092
15°	2076	2064	2076
20°	2040	2040	2062
25°	1978	2021	2043
30°	1950	1985	2037
35°	1905	1954	1998
40°	1831	1919	1927
45°	1775	1838	1841
50°	1717	1794	1760
55°	1636	1667	1656
60°	1530	1545	1517
65°	1364	1399	1354
70°	1170	1174	1142
75°	926	924	889
80°	621	604	580
85°	337	333	312

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 1886 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.7	3.7
10°-20°	208.9	10.6
20°-30°	313.0	15.8
30°-40°	371.0	18.8
40°-50°	371.6	18.8
50°-60°	315.5	16.0
60°-70°	212.7	10.8
70°-80°	93.5	4.7
80°-90°	15.2	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°	595.6	30.2
0°-40°	966.6	48.9
0°-60°	1653.7	83.7
0°-90°	1975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1975.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	778	776	778	776	795	73
15°	745	736	741	745	745	208
25°	666	670	681	690	688	308
35°	580	582	595	609	608	360
45°	466	475	483	496	484	361
55°	349	346	355	353	353	310
65°	214	211	220	211	213	213
75°	89	87	89	83	86	96
85°	11	11	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°	783.6	783.6	783.6	783.6	783.6
2.5°	790.4	784.4	778.9	785.4	789.3
5°	778.1	776.2	778.4	776.0	794.8
7.5°	762.1	769.1	773.1	770.6	771.7
10°	753.6	751.2	760.2	766.4	765.5
12.5°	744.5	748.1	748.6	755.4	756.0
15°	745.0	736.4	740.9	744.8	745.1
17.5°	716.0	725.4	728.5	737.3	726.4
20°	712.5	705.7	712.5	721.5	720.1
22.5°	690.7	683.2	697.7	705.7	705.2
25°	666.1	669.7	680.6	689.5	688.1
27.5°	644.4	648.7	664.2	676.5	668.6
30°	627.7	625.6	638.7	649.7	655.7
32.5°	597.9	605.6	620.9	631.8	626.0
35°	579.8	581.5	594.9	608.7	608.3
37.5°	548.1	556.1	575.0	578.8	575.3
40°	521.1	529.1	546.2	550.3	548.6
42.5°	501.1	502.6	517.2	522.0	514.4
45°	466.4	475.1	483.0	495.5	483.7
47.5°	436.9	440.9	457.9	461.3	455.1
50°	410.1	411.5	428.6	424.4	420.4
52.5°	376.4	382.4	392.0	391.2	386.4
55°	348.7	346.3	355.4	353.0	352.9
57.5°	315.4	319.4	326.9	323.1	316.9
60°	284.2	284.3	287.0	282.7	281.9
62.5°	249.5	250.7	251.3	246.0	254.7
65°	214.2	211.4	219.7	211.3	212.7
67.5°	181.7	183.1	182.3	177.1	179.1
70°	148.7	150.6	149.2	143.3	145.1
72.5°	118.6	116.4	117.8	110.3	113.7
75°	89.1	87.3	88.9	82.7	85.5
77.5°	60.7	62.1	61.1	57.8	59.7
80°	40.1	39.0	39.0	37.0	37.4
82.5°	23.4	22.3	22.0	21.3	22.3
85°	10.9	10.6	10.8	10.5	10.1
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)