

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: P590874

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-80-94-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590874  
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-LD4-4LO-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

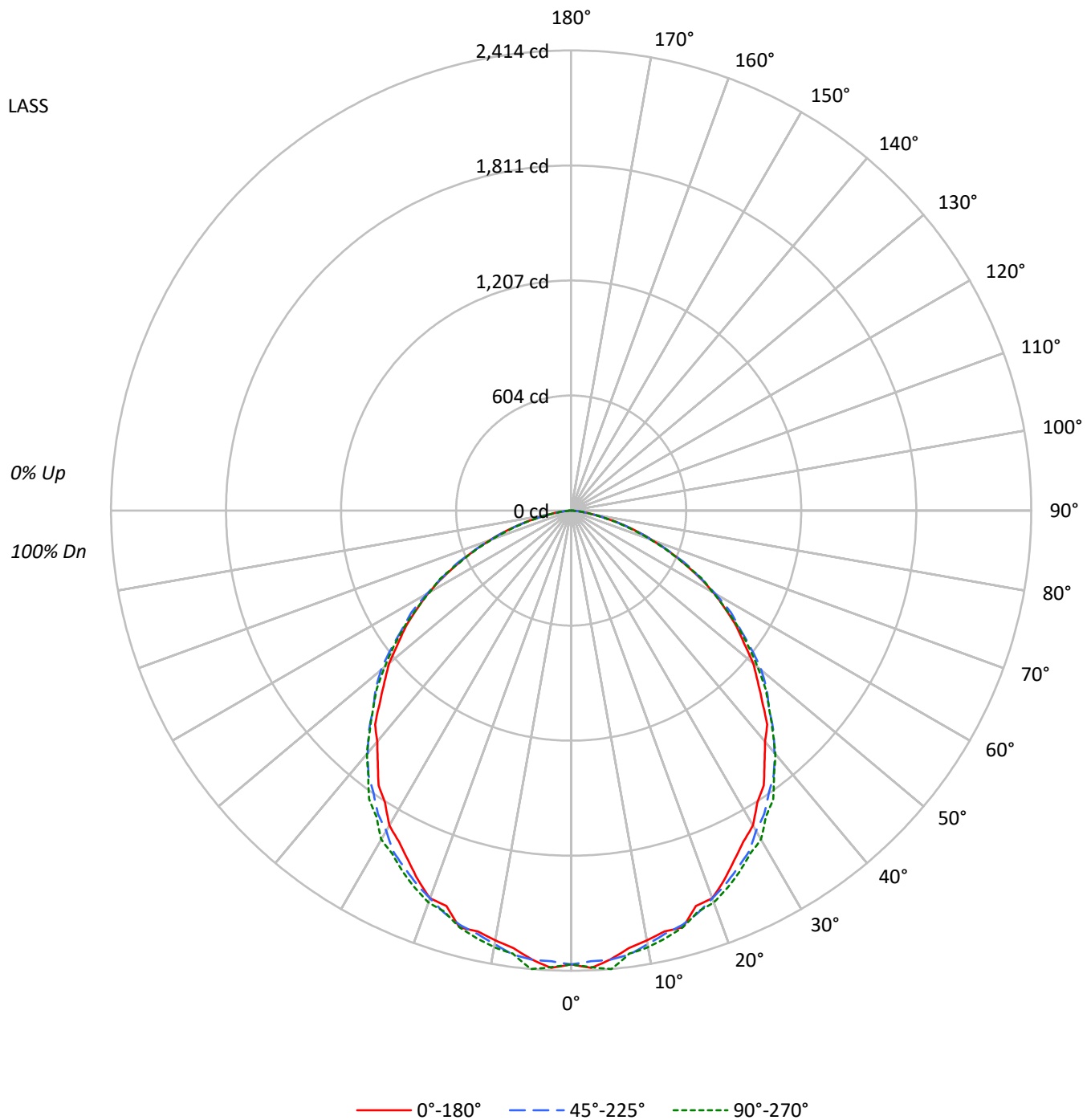
Lumens per Lamp: N/A  
Luminaire Lumens: 6000.0 lumens  
Efficiency: N/A  
Efficacy: 128.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.8  
Input Voltage (V):  
Input Current (Ain): NR  
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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

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

	0°	45°	90°
0°	6406	6406	6406
5°	6385	6388	6522
10°	6256	6310	6355
15°	6305	6271	6306
20°	6199	6199	6265
25°	6008	6139	6207
30°	5926	6030	6190
35°	5786	5937	6071
40°	5561	5828	5854
45°	5393	5584	5593
50°	5215	5451	5347
55°	4969	5066	5030
60°	4647	4693	4609
65°	4143	4249	4114
70°	3555	3567	3468
75°	2816	2809	2700
80°	1886	1833	1762
85°	1025	1016	948

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 5728 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.9	3.7
10°-20°	634.7	10.6
20°-30°	950.9	15.8
30°-40°	1127.0	18.8
40°-50°	1129.0	18.8
50°-60°	958.4	16.0
60°-70°	646.1	10.8
70°-80°	283.9	4.7
80°-90°	46.1	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°	1809.5	30.2
0°-40°	2936.4	48.9
0°-60°	5023.8	83.7
0°-90°	6000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6000.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2381	2381	2381	2381	2381	
5°	2364	2358	2365	2358	2414	223
15°	2263	2237	2251	2263	2264	631
25°	2024	2034	2068	2095	2090	935
35°	1761	1766	1807	1849	1848	1094
45°	1417	1444	1467	1505	1470	1096
55°	1059	1052	1080	1072	1072	942
65°	651	642	667	642	646	647
75°	271	265	270	251	260	290
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2380.6	2380.6	2380.6	2380.6	2380.6
2.5°	2401.2	2383.1	2366.2	2385.9	2397.9
5°	2363.7	2358.2	2364.7	2357.6	2414.5
7.5°	2315.2	2336.4	2348.7	2341.0	2344.4
10°	2289.4	2282.0	2309.3	2328.4	2325.6
12.5°	2261.7	2272.8	2274.3	2294.9	2296.7
15°	2263.2	2237.1	2250.9	2262.6	2263.5
17.5°	2175.3	2203.6	2213.1	2239.9	2206.7
20°	2164.6	2144.0	2164.6	2191.9	2187.6
22.5°	2098.5	2075.4	2119.7	2144.0	2142.4
25°	2023.5	2034.5	2067.7	2094.8	2090.5
27.5°	1957.7	1970.6	2017.9	2055.1	2031.2
30°	1907.0	1900.5	1940.5	1973.7	1992.1
32.5°	1816.3	1839.7	1886.4	1919.3	1901.8
35°	1761.3	1766.5	1807.4	1849.2	1848.0
37.5°	1665.1	1689.4	1746.8	1758.5	1747.8
40°	1583.0	1607.3	1659.2	1671.8	1666.6
42.5°	1522.4	1526.8	1571.3	1585.8	1562.7
45°	1417.0	1443.5	1467.4	1505.2	1469.6
47.5°	1327.3	1339.6	1391.2	1401.3	1382.6
50°	1245.8	1250.1	1302.1	1289.5	1277.2
52.5°	1143.4	1161.6	1190.8	1188.3	1173.9
55°	1059.2	1052.2	1079.8	1072.4	1072.1
57.5°	958.1	970.4	993.1	981.5	962.7
60°	863.4	863.7	872.0	858.8	856.4
62.5°	758.0	761.7	763.5	747.2	773.7
65°	650.7	642.1	667.3	641.8	646.1
67.5°	552.1	556.4	553.9	537.9	544.1
70°	451.8	457.4	453.4	435.2	440.8
72.5°	360.2	353.5	357.8	335.0	345.5
75°	270.8	265.3	270.2	251.1	259.7
77.5°	184.4	188.7	185.7	175.5	181.4
80°	121.7	118.3	118.3	112.5	113.7
82.5°	71.0	67.6	66.7	64.9	67.6
85°	33.2	32.3	32.9	32.0	30.7
87.5°	12.0	12.3	12.3	11.7	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)