

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: P562835

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-82-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562835  
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-LD4-2LO-50-UNV-82-85-EDD  
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

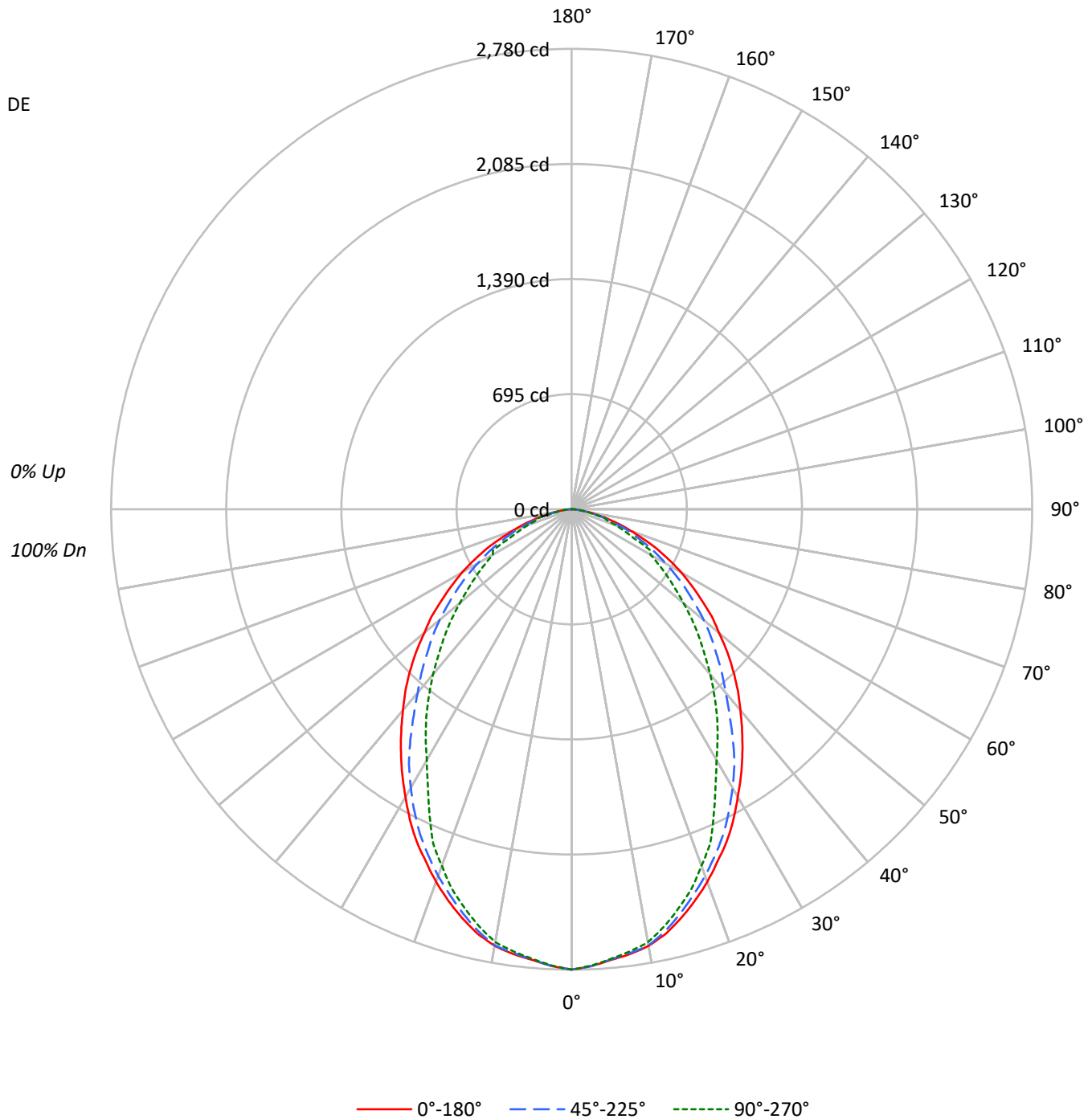
Lumens per Lamp: N/A  
Luminaire Lumens: 5457.0 lumens  
Efficiency: N/A  
Efficacy: 116.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	3740	3740	3740
5°	3689	3685	3681
10°	3657	3653	3627
15°	3559	3523	3474
20°	3428	3373	3281
25°	3287	3215	3015
30°	3116	3016	2716
35°	2951	2787	2513
40°	2783	2540	2286
45°	2623	2348	2067
50°	2428	2179	1843
55°	2246	1975	1651
60°	2058	1764	1479
65°	1811	1545	1309
70°	1492	1353	1113
75°	1186	1036	1086
80°	797	747	697
85°	496	596	695

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2623 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	258.8	4.7
10°-20°	710.1	13.0
20°-30°	983.1	18.0
30°-40°	1048.3	19.2
40°-50°	956.4	17.5
50°-60°	749.2	13.7
60°-70°	488.3	8.9
70°-80°	216.3	4.0
80°-90°	46.5	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°	1952.0	35.8
0°-40°	3000.3	55.0
0°-60°	4705.9	86.2
0°-90°	5457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5457.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2780	2780	2780	2780	2780	
5°	2732	2728	2728	2725	2725	259
15°	2555	2555	2529	2503	2494	718
25°	2214	2201	2166	2089	2031	1017
35°	1796	1784	1697	1568	1530	1123
45°	1379	1350	1234	1131	1086	1062
55°	958	929	842	742	704	859
65°	569	537	485	495	411	561
75°	228	212	199	190	209	245
85°	32	35	39	42	45	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2779.7	2779.7	2779.7	2779.7	2779.7
2.5°	2760.4	2760.4	2760.4	2757.2	2757.2
5°	2731.5	2728.3	2728.3	2725.1	2725.1
7.5°	2709.0	2705.8	2702.6	2699.4	2693.0
10°	2676.9	2676.9	2673.7	2657.6	2654.4
12.5°	2625.5	2622.3	2609.4	2586.9	2580.5
15°	2554.8	2554.8	2529.1	2503.4	2493.7
17.5°	2477.6	2474.4	2442.3	2416.6	2403.7
20°	2394.1	2387.7	2355.5	2313.8	2291.3
22.5°	2300.9	2300.9	2262.3	2207.7	2185.2
25°	2214.1	2201.3	2165.9	2088.8	2031.0
27.5°	2114.5	2095.2	2056.7	1947.4	1879.9
30°	2005.3	1995.6	1941.0	1799.6	1748.2
32.5°	1902.4	1886.4	1828.5	1680.7	1638.9
35°	1796.4	1783.5	1696.8	1568.2	1529.7
37.5°	1690.3	1674.3	1565.0	1462.2	1414.0
40°	1584.3	1565.0	1446.1	1352.9	1301.5
42.5°	1484.7	1459.0	1343.3	1243.6	1185.8
45°	1378.6	1349.7	1234.0	1131.2	1086.2
47.5°	1272.6	1246.9	1140.8	1034.8	983.3
50°	1160.1	1137.6	1041.2	935.1	880.5
52.5°	1066.9	1031.6	938.4	832.3	787.3
55°	957.6	928.7	842.0	742.3	703.8
57.5°	858.0	829.1	748.8	655.6	623.4
60°	764.8	723.0	655.6	575.2	549.5
62.5°	662.0	629.9	572.0	504.5	536.7
65°	568.8	536.7	485.2	494.9	411.3
67.5°	466.0	449.9	404.9	359.9	347.1
70°	379.2	359.9	343.9	295.6	282.8
72.5°	302.1	282.8	260.3	234.6	224.9
75°	228.2	212.1	199.2	189.6	208.9
77.5°	157.5	151.0	141.4	131.8	128.5
80°	102.8	99.6	96.4	93.2	90.0
82.5°	61.1	61.1	61.1	61.1	61.1
85°	32.1	35.3	38.6	41.8	45.0
87.5°	19.3	19.3	22.5	25.7	28.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)