

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: P559736

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-80-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559736  
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-12-2-LD4-1HI-50-UNV-80-88-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

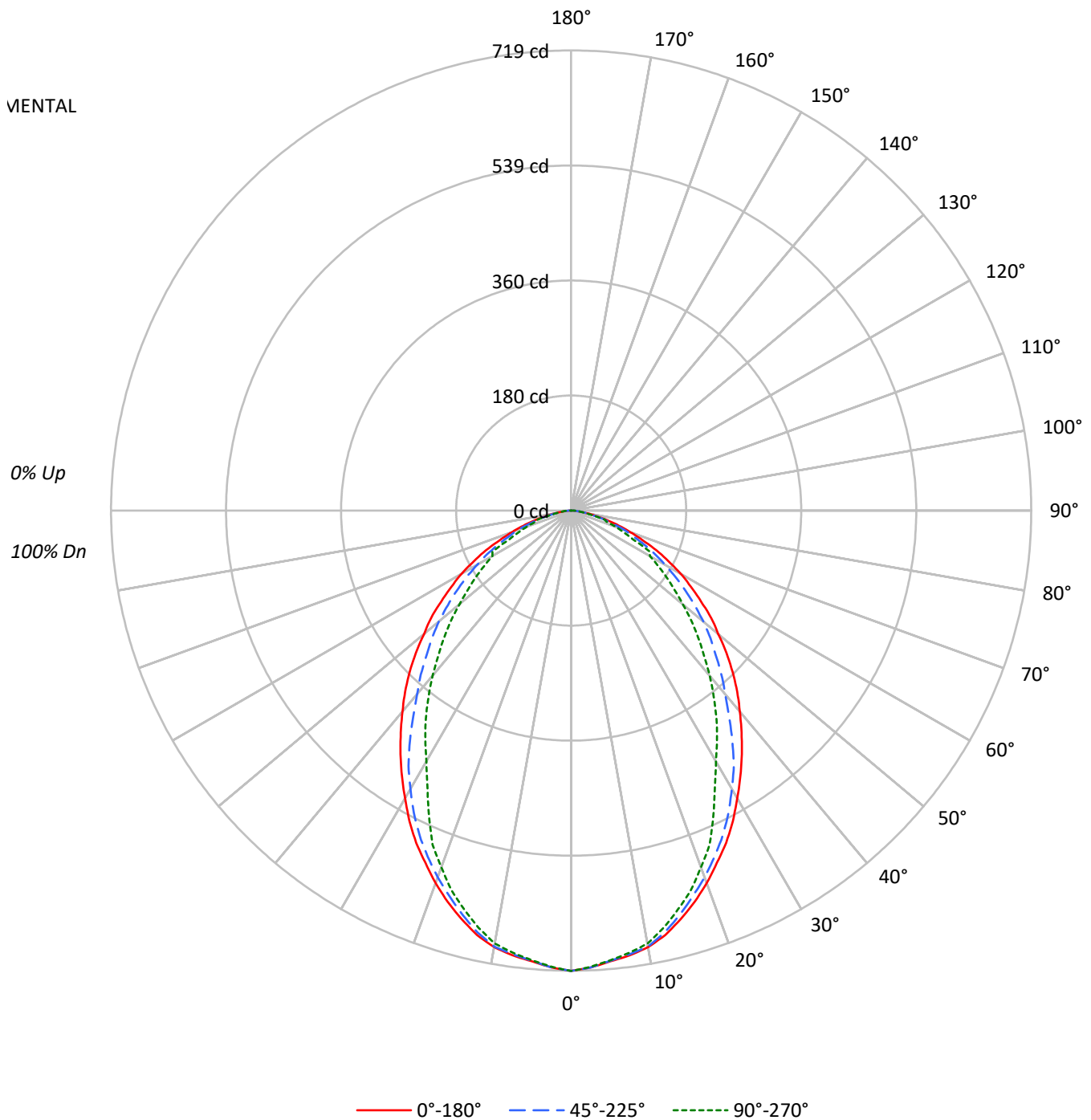
Lumens per Lamp: N/A  
Luminaire Lumens: 1412.0 lumens  
Efficiency: N/A  
Efficacy: 65.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3871	3871	3871
5°	3818	3814	3809
10°	3785	3781	3753
15°	3683	3646	3595
20°	3548	3491	3396
25°	3402	3328	3121
30°	3225	3121	2811
35°	3054	2884	2600
40°	2880	2629	2366
45°	2715	2430	2139
50°	2514	2256	1907
55°	2325	2045	1709
60°	2130	1826	1531
65°	1875	1599	1355
70°	1544	1400	1152
75°	1227	1073	1123
80°	824	772	722
85°	513	618	716

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2715 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.0	4.7
10°-20°	183.7	13.0
20°-30°	254.4	18.0
30°-40°	271.2	19.2
40°-50°	247.5	17.5
50°-60°	193.9	13.7
60°-70°	126.4	8.9
70°-80°	56.0	4.0
80°-90°	12.0	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°	505.1	35.8
0°-40°	776.3	55.0
0°-60°	1217.6	86.2
0°-90°	1412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1412.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	707	706	706	705	705	67
15°	661	661	654	648	645	186
25°	573	570	560	540	526	263
35°	465	462	439	406	396	291
45°	357	349	319	293	281	275
55°	248	240	218	192	182	222
65°	147	139	126	128	106	145
75°	59	55	52	49	54	63
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	719.3	719.3	719.3	719.3	719.3
2.5°	714.3	714.3	714.3	713.4	713.4
5°	706.8	705.9	705.9	705.1	705.1
7.5°	701.0	700.1	699.3	698.5	696.8
10°	692.6	692.6	691.8	687.7	686.8
12.5°	679.3	678.5	675.2	669.4	667.7
15°	661.0	661.0	654.4	647.7	645.2
17.5°	641.1	640.3	631.9	625.3	622.0
20°	619.5	617.8	609.5	598.7	592.9
22.5°	595.4	595.4	585.4	571.2	565.4
25°	572.9	569.6	560.4	540.5	525.5
27.5°	547.1	542.1	532.2	503.9	486.4
30°	518.9	516.4	502.2	465.6	452.3
32.5°	492.3	488.1	473.1	434.9	424.1
35°	464.8	461.5	439.0	405.8	395.8
37.5°	437.4	433.2	404.9	378.3	365.9
40°	409.9	404.9	374.2	350.1	336.8
42.5°	384.2	377.5	347.6	321.8	306.8
45°	356.7	349.2	319.3	292.7	281.0
47.5°	329.3	322.6	295.2	267.7	254.4
50°	300.2	294.4	269.4	242.0	227.8
52.5°	276.1	266.9	242.8	215.4	203.7
55°	247.8	240.3	217.9	192.1	182.1
57.5°	222.0	214.5	193.7	169.6	161.3
60°	197.9	187.1	169.6	148.8	142.2
62.5°	171.3	163.0	148.0	130.5	138.9
65°	147.2	138.9	125.6	128.1	106.4
67.5°	120.6	116.4	104.8	93.1	89.8
70°	98.1	93.1	89.0	76.5	73.2
72.5°	78.2	73.2	67.4	60.7	58.2
75°	59.0	54.9	51.6	49.1	54.0
77.5°	40.7	39.1	36.6	34.1	33.3
80°	26.6	25.8	24.9	24.1	23.3
82.5°	15.8	15.8	15.8	15.8	15.8
85°	8.3	9.1	10.0	10.8	11.6
87.5°	5.0	5.0	5.8	6.7	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)