

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: P559673

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-80-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559673  
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-40-UNV-80-88-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

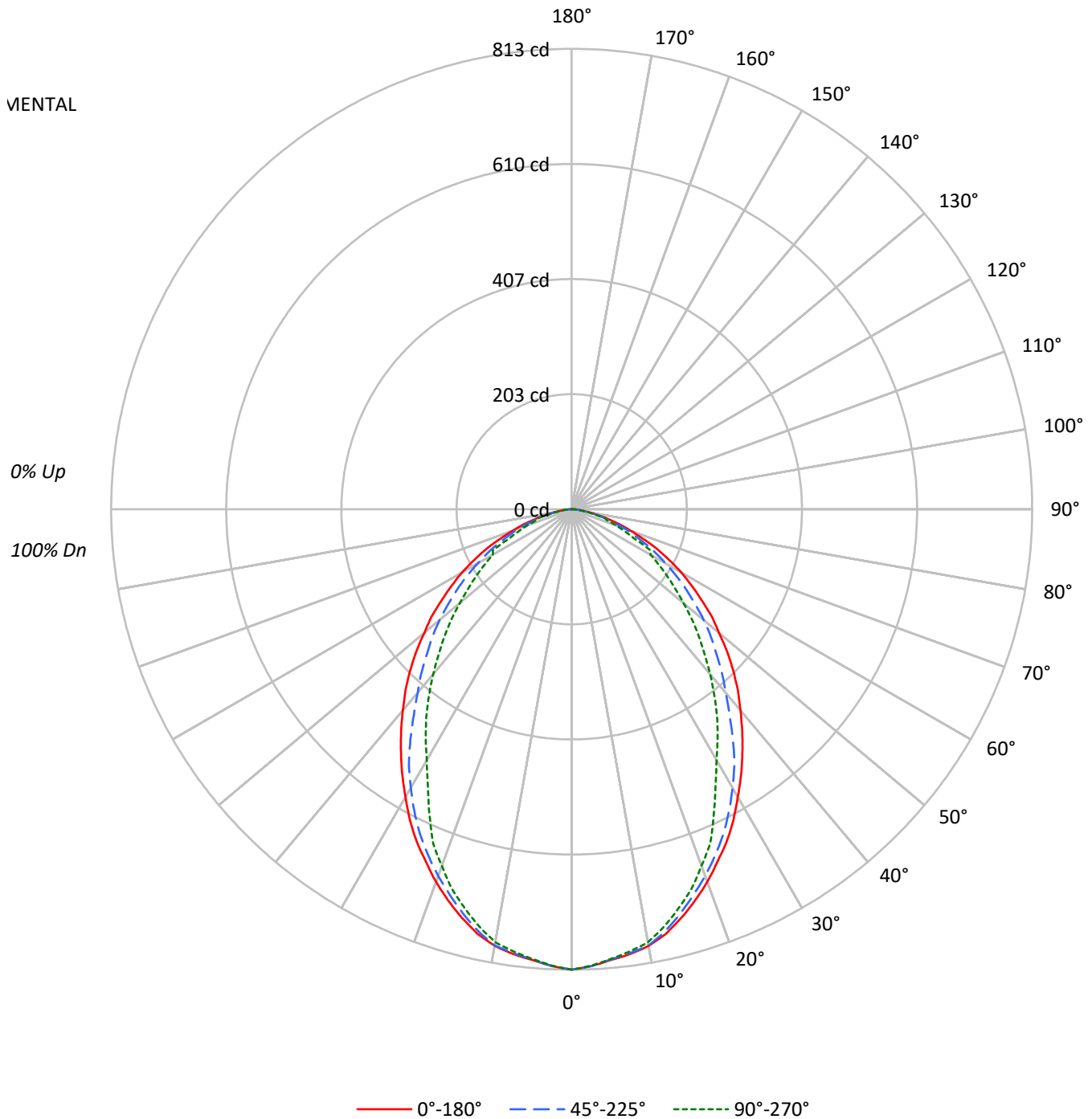
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1596.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 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



TEST NUMBER: P559673  
CATALOG NUMBER: FSR-12-2-LD4-1HI-40-UNV-80-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559673

CATALOG NUMBER: FSR-12-2-LD4-1HI-40-UNV-80-88-EDD

**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	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°	4376	4376	4376
5°	4316	4311	4306
10°	4279	4274	4242
15°	4163	4121	4064
20°	4010	3946	3838
25°	3846	3762	3527
30°	3645	3528	3177
35°	3452	3260	2939
40°	3256	2971	2674
45°	3069	2747	2418
50°	2841	2550	2156
55°	2628	2310	1931
60°	2408	2063	1730
65°	2119	1807	1532
70°	1745	1583	1301
75°	1387	1212	1271
80°	933	874	815
85°	580	698	815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3069 cd/sqm



TEST NUMBER: P559673

CATALOG NUMBER: FSR-12-2-LD4-1HI-40-UNV-80-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	4.7
10°-20°	207.7	13.0
20°-30°	287.5	18.0
30°-40°	306.6	19.2
40°-50°	279.7	17.5
50°-60°	219.1	13.7
60°-70°	142.8	8.9
70°-80°	63.3	4.0
80°-90°	13.6	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°	570.9	35.8
0°-40°	877.5	55.0
0°-60°	1376.3	86.2
0°-90°	1596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1596.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	813	813	813	813	813	
5°	799	798	798	797	797	76
15°	747	747	740	732	729	210
25°	648	644	634	611	594	297
35°	525	522	496	459	447	328
45°	403	395	361	331	318	311
55°	280	272	246	217	206	251
65°	166	157	142	145	120	164
75°	67	62	58	56	61	72
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



TEST NUMBER: P559673

CATALOG NUMBER: FSR-12-2-LD4-1HI-40-UNV-80-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	813.0	813.0	813.0	813.0	813.0
2.5°	807.3	807.3	807.3	806.4	806.4
5°	798.9	797.9	797.9	797.0	797.0
7.5°	792.3	791.4	790.4	789.5	787.6
10°	782.9	782.9	782.0	777.3	776.3
12.5°	767.9	766.9	763.2	756.6	754.7
15°	747.2	747.2	739.7	732.2	729.3
17.5°	724.6	723.7	714.3	706.8	703.0
20°	700.2	698.3	688.9	676.7	670.1
22.5°	672.9	672.9	661.7	645.7	639.1
25°	647.6	643.8	633.5	610.9	594.0
27.5°	618.4	612.8	601.5	569.6	549.8
30°	586.5	583.7	567.7	526.3	511.3
32.5°	556.4	551.7	534.8	491.5	479.3
35°	525.4	521.6	496.2	458.7	447.4
37.5°	494.4	489.7	457.7	427.6	413.5
40°	463.4	457.7	422.9	395.7	380.6
42.5°	434.2	426.7	392.9	363.7	346.8
45°	403.2	394.7	360.9	330.8	317.7
47.5°	372.2	364.7	333.7	302.6	287.6
50°	339.3	332.7	304.5	273.5	257.5
52.5°	312.0	301.7	274.4	243.4	230.3
55°	280.1	271.6	246.2	217.1	205.8
57.5°	250.9	242.5	219.0	191.7	182.3
60°	223.7	211.5	191.7	168.2	160.7
62.5°	193.6	184.2	167.3	147.6	157.0
65°	166.4	157.0	141.9	144.7	120.3
67.5°	136.3	131.6	118.4	105.3	101.5
70°	110.9	105.3	100.6	86.5	82.7
72.5°	88.3	82.7	76.1	68.6	65.8
75°	66.7	62.0	58.3	55.5	61.1
77.5°	46.1	44.2	41.4	38.5	37.6
80°	30.1	29.1	28.2	27.3	26.3
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.3	11.3	12.2	13.2
87.5°	5.6	5.6	6.6	7.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)