

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: P558834

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558834  
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-12-1-LD4-1STD-35-UNV-80-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

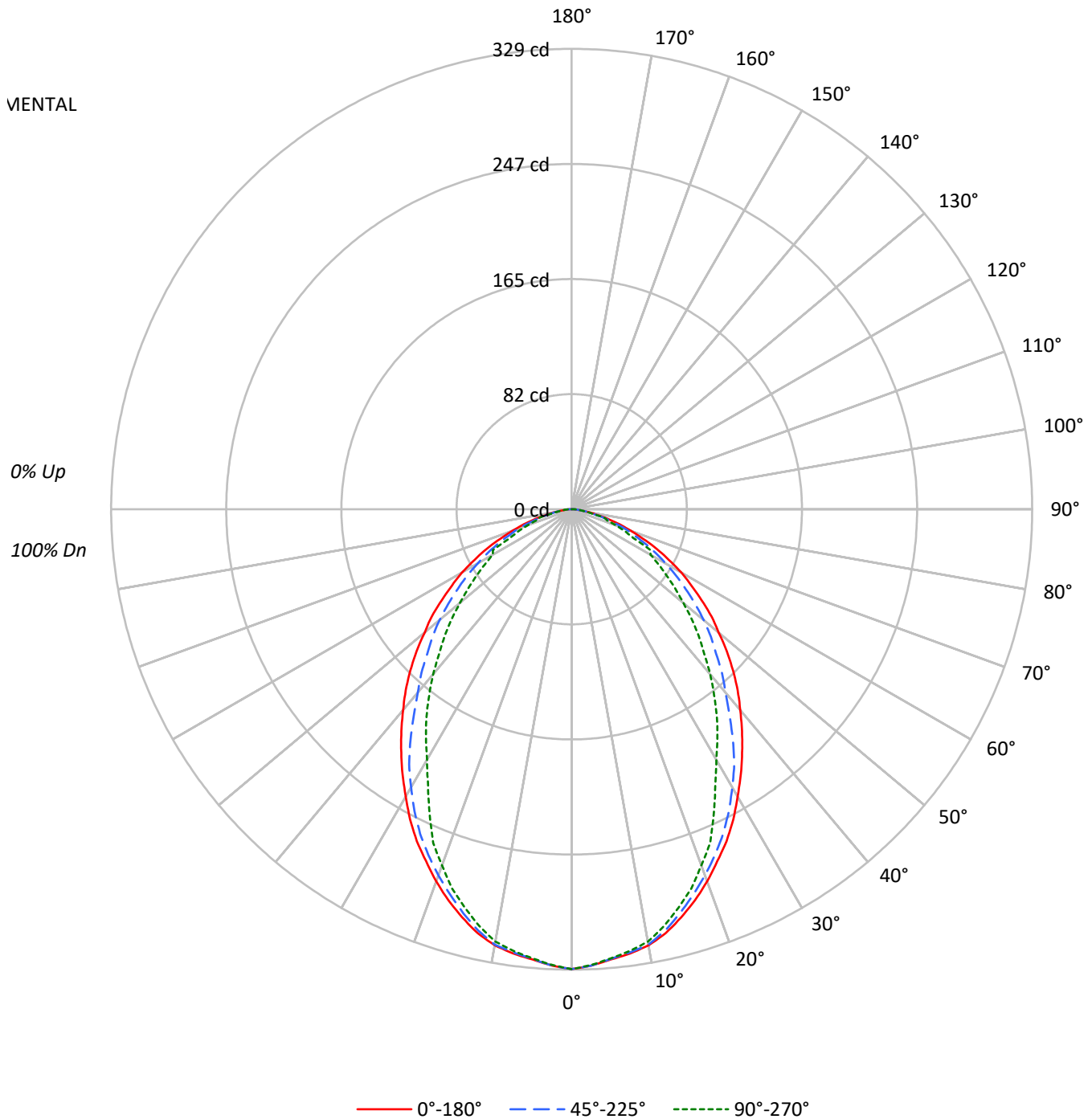
Lumens per Lamp: N/A  
Luminaire Lumens: 645.0 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3537	3537	3537
5°	3489	3485	3480
10°	3458	3454	3429
15°	3365	3331	3284
20°	3242	3189	3102
25°	3108	3040	2852
30°	2946	2851	2568
35°	2790	2636	2376
40°	2632	2401	2161
45°	2480	2221	1955
50°	2296	2061	1743
55°	2124	1867	1561
60°	1946	1668	1399
65°	1712	1462	1238
70°	1410	1278	1051
75°	1123	977	1027
80°	756	707	657
85°	469	568	655

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2480 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.6	4.7
10°-20°	83.9	13.0
20°-30°	116.2	18.0
30°-40°	123.9	19.2
40°-50°	113.0	17.5
50°-60°	88.6	13.7
60°-70°	57.7	8.9
70°-80°	25.6	4.0
80°-90°	5.5	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°	230.7	35.8
0°-40°	354.6	55.0
0°-60°	556.2	86.2
0°-90°	645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	645.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	329	329	329	329	329	
5°	323	322	322	322	322	31
15°	302	302	299	296	295	85
25°	262	260	256	247	240	120
35°	212	211	201	185	181	133
45°	163	160	146	134	128	126
55°	113	110	100	88	83	102
65°	67	63	57	58	49	66
75°	27	25	24	22	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	328.6	328.6	328.6	328.6	328.6
2.5°	326.3	326.3	326.3	325.9	325.9
5°	322.9	322.5	322.5	322.1	322.1
7.5°	320.2	319.8	319.4	319.1	318.3
10°	316.4	316.4	316.0	314.1	313.7
12.5°	310.3	309.9	308.4	305.8	305.0
15°	302.0	302.0	298.9	295.9	294.7
17.5°	292.9	292.5	288.7	285.6	284.1
20°	283.0	282.2	278.4	273.5	270.8
22.5°	272.0	272.0	267.4	260.9	258.3
25°	261.7	260.2	256.0	246.9	240.1
27.5°	249.9	247.7	243.1	230.2	222.2
30°	237.0	235.9	229.4	212.7	206.6
32.5°	224.9	223.0	216.1	198.7	193.7
35°	212.3	210.8	200.6	185.4	180.8
37.5°	199.8	197.9	185.0	172.8	167.1
40°	187.3	185.0	170.9	159.9	153.8
42.5°	175.5	172.4	158.8	147.0	140.2
45°	162.9	159.5	145.9	133.7	128.4
47.5°	150.4	147.4	134.8	122.3	116.2
50°	137.1	134.5	123.1	110.5	104.1
52.5°	126.1	121.9	110.9	98.4	93.1
55°	113.2	109.8	99.5	87.7	83.2
57.5°	101.4	98.0	88.5	77.5	73.7
60°	90.4	85.5	77.5	68.0	65.0
62.5°	78.2	74.4	67.6	59.6	63.4
65°	67.2	63.4	57.4	58.5	48.6
67.5°	55.1	53.2	47.9	42.5	41.0
70°	44.8	42.5	40.6	34.9	33.4
72.5°	35.7	33.4	30.8	27.7	26.6
75°	27.0	25.1	23.5	22.4	24.7
77.5°	18.6	17.9	16.7	15.6	15.2
80°	12.2	11.8	11.4	11.0	10.6
82.5°	7.2	7.2	7.2	7.2	7.2
85°	3.8	4.2	4.6	4.9	5.3
87.5°	2.3	2.3	2.7	3.0	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)