

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: P558508

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558508  
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-LD4-1HI-35-UNV-93-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

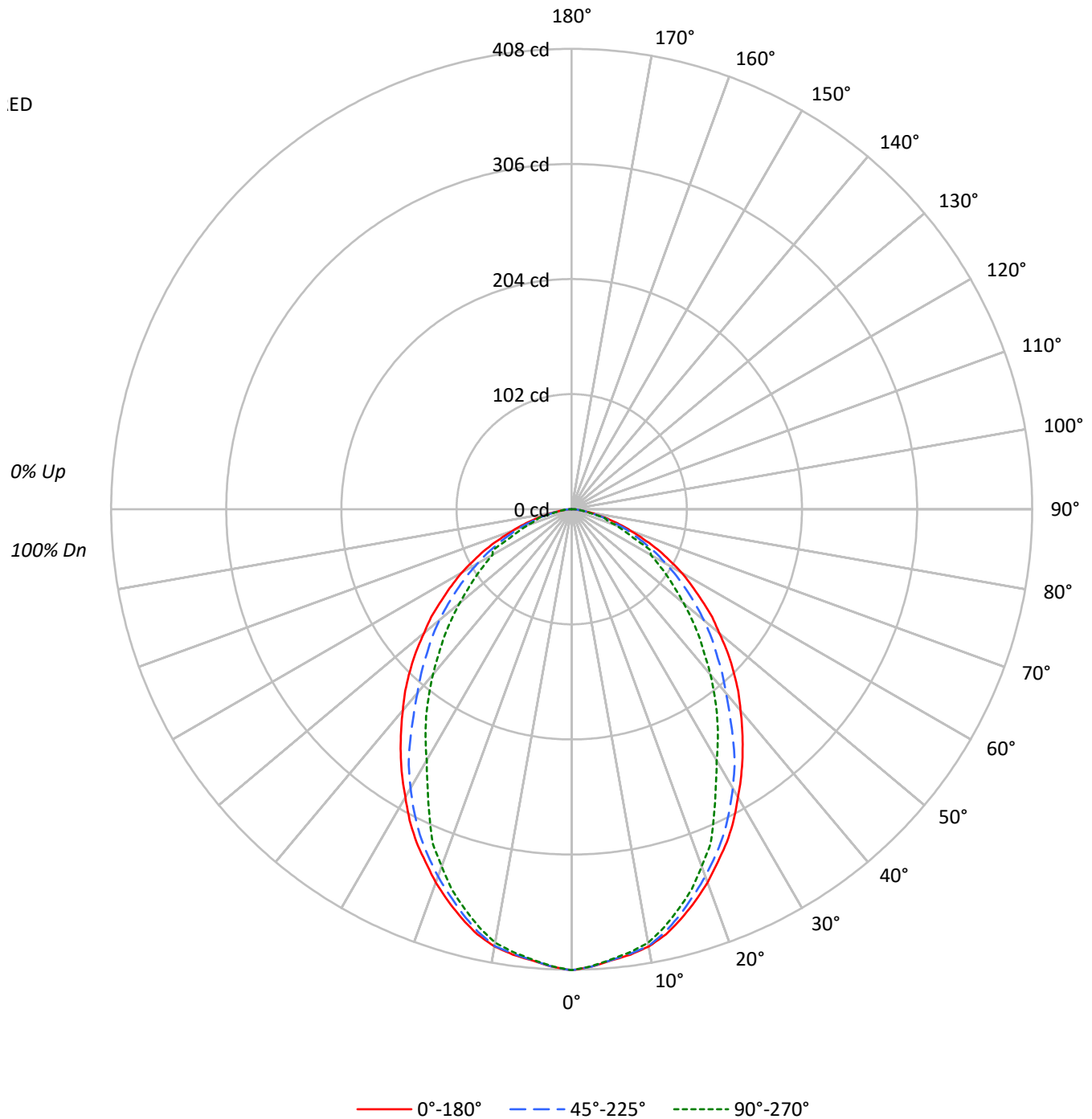
Lumens per Lamp: N/A  
Luminaire Lumens: 802.0 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4397	4397	4397
5°	4337	4333	4327
10°	4300	4294	4264
15°	4184	4142	4084
20°	4031	3966	3857
25°	3865	3780	3545
30°	3663	3546	3193
35°	3469	3277	2954
40°	3271	2986	2688
45°	3084	2761	2430
50°	2855	2562	2167
55°	2640	2321	1940
60°	2420	2073	1739
65°	2129	1816	1541
70°	1753	1589	1309
75°	1393	1219	1277
80°	936	880	818
85°	580	704	815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3084 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.0	4.7
10°-20°	104.4	13.0
20°-30°	144.5	18.0
30°-40°	154.1	19.2
40°-50°	140.6	17.5
50°-60°	110.1	13.7
60°-70°	71.8	8.9
70°-80°	31.8	4.0
80°-90°	6.8	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°	286.9	35.8
0°-40°	441.0	55.0
0°-60°	691.6	86.2
0°-90°	802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	802.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	401	401	401	400	400	38
15°	376	376	372	368	366	106
25°	325	324	318	307	298	149
35°	264	262	249	230	225	165
45°	203	198	181	166	160	156
55°	141	136	124	109	103	126
65°	84	79	71	73	60	82
75°	34	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	408.5	408.5	408.5	408.5	408.5
2.5°	405.7	405.7	405.7	405.2	405.2
5°	401.4	401.0	401.0	400.5	400.5
7.5°	398.1	397.7	397.2	396.7	395.8
10°	393.4	393.4	392.9	390.6	390.1
12.5°	385.9	385.4	383.5	380.2	379.2
15°	375.5	375.5	371.7	367.9	366.5
17.5°	364.1	363.7	358.9	355.2	353.3
20°	351.9	350.9	346.2	340.0	336.7
22.5°	338.2	338.2	332.5	324.5	321.2
25°	325.4	323.5	318.3	307.0	298.5
27.5°	310.8	307.9	302.3	286.2	276.3
30°	294.7	293.3	285.3	264.5	256.9
32.5°	279.6	277.2	268.7	247.0	240.9
35°	264.0	262.1	249.4	230.5	224.8
37.5°	248.4	246.1	230.0	214.9	207.8
40°	232.8	230.0	212.5	198.8	191.3
42.5°	218.2	214.4	197.4	182.8	174.3
45°	202.6	198.4	181.4	166.2	159.6
47.5°	187.0	183.2	167.7	152.1	144.5
50°	170.5	167.2	153.0	137.4	129.4
52.5°	156.8	151.6	137.9	122.3	115.7
55°	140.7	136.5	123.7	109.1	103.4
57.5°	126.1	121.8	110.0	96.3	91.6
60°	112.4	106.3	96.3	84.5	80.8
62.5°	97.3	92.6	84.1	74.1	78.9
65°	83.6	78.9	71.3	72.7	60.5
67.5°	68.5	66.1	59.5	52.9	51.0
70°	55.7	52.9	50.5	43.5	41.6
72.5°	44.4	41.6	38.3	34.5	33.1
75°	33.5	31.2	29.3	27.9	30.7
77.5°	23.1	22.2	20.8	19.4	18.9
80°	15.1	14.6	14.2	13.7	13.2
82.5°	9.0	9.0	9.0	9.0	9.0
85°	4.7	5.2	5.7	6.1	6.6
87.5°	2.8	2.8	3.3	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)