

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: P589875

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-93-96-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P589875  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-1HI-35-UNV-93-96-EDD  
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

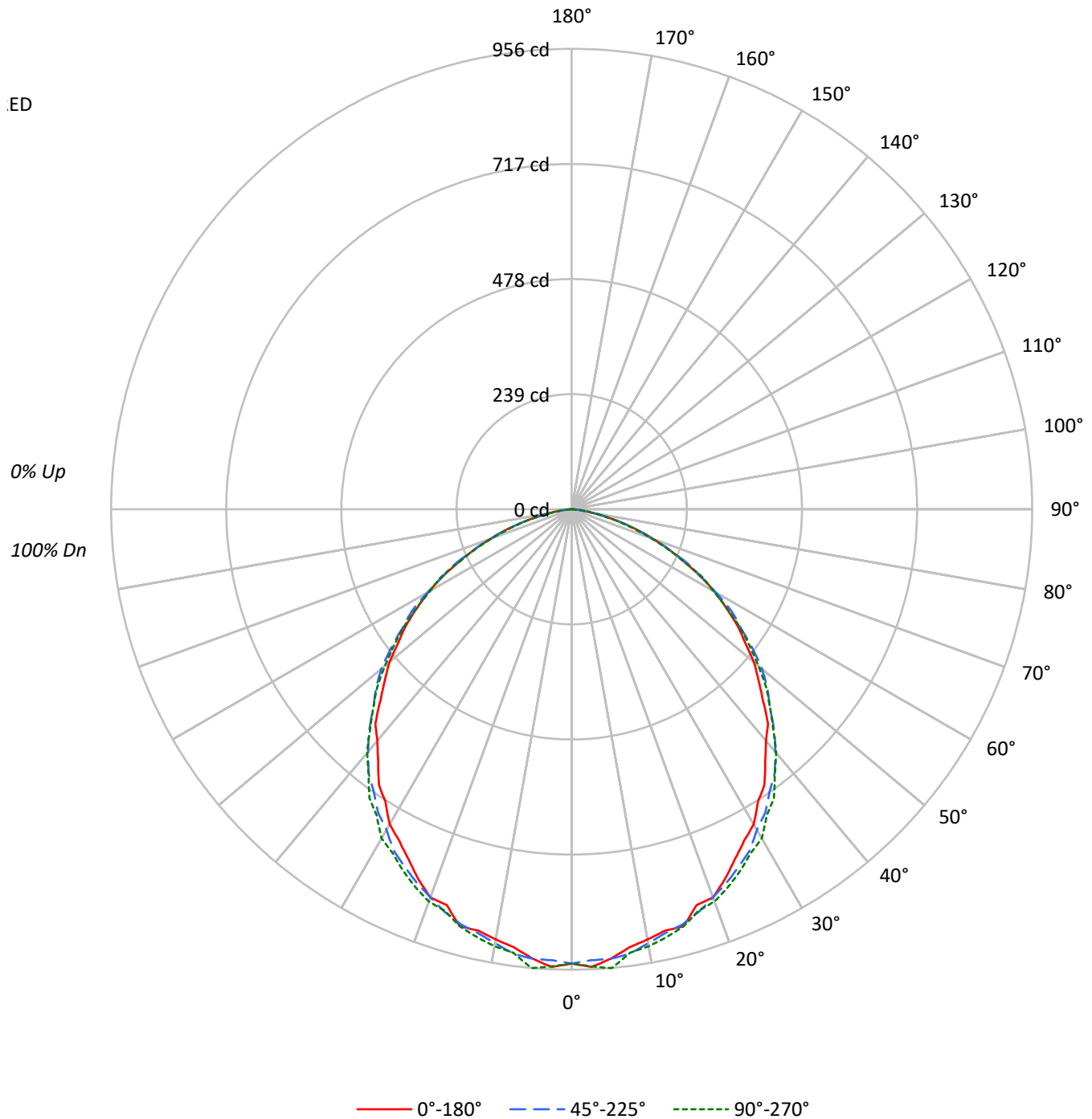
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2377.0 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2538	2538	2538
5°	2529	2531	2584
10°	2478	2500	2517
15°	2498	2484	2498
20°	2456	2456	2482
25°	2380	2432	2459
30°	2348	2389	2452
35°	2292	2352	2405
40°	2203	2309	2320
45°	2136	2212	2216
50°	2066	2159	2118
55°	1969	2007	1993
60°	1841	1859	1826
65°	1642	1684	1630
70°	1408	1413	1374
75°	1116	1112	1070
80°	747	727	699
85°	408	401	377

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 2269 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.7	3.7
10°-20°	251.4	10.6
20°-30°	376.7	15.8
30°-40°	446.5	18.8
40°-50°	447.3	18.8
50°-60°	379.7	16.0
60°-70°	256.0	10.8
70°-80°	112.5	4.7
80°-90°	18.3	0.8
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°	716.8	30.2
0°-40°	1163.3	48.9
0°-60°	1990.3	83.7
0°-90°	2377.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2377.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	936	934	937	934	956	88
15°	897	886	892	896	897	250
25°	802	806	819	830	828	371
35°	698	700	716	733	732	433
45°	561	572	581	596	582	434
55°	420	417	428	425	425	373
65°	258	254	264	254	256	256
75°	107	105	107	100	103	115
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	943.1	943.1	943.1	943.1	943.1
2.5°	951.3	944.1	937.4	945.2	950.0
5°	936.4	934.2	936.8	934.0	956.5
7.5°	917.2	925.6	930.5	927.4	928.8
10°	907.0	904.0	914.9	922.4	921.3
12.5°	896.0	900.4	901.0	909.2	909.9
15°	896.6	886.3	891.7	896.4	896.7
17.5°	861.8	873.0	876.8	887.4	874.2
20°	857.5	849.4	857.5	868.4	866.7
22.5°	831.3	822.2	839.7	849.4	848.8
25°	801.6	806.0	819.2	829.9	828.2
27.5°	775.6	780.7	799.4	814.2	804.7
30°	755.5	752.9	768.8	781.9	789.2
32.5°	719.6	728.8	747.3	760.4	753.4
35°	697.8	699.8	716.0	732.6	732.1
37.5°	659.6	669.3	692.0	696.7	692.4
40°	627.1	636.8	657.3	662.3	660.3
42.5°	603.1	604.8	622.5	628.2	619.1
45°	561.4	571.8	581.3	596.3	582.2
47.5°	525.8	530.7	551.1	555.2	547.7
50°	493.5	495.3	515.8	510.8	506.0
52.5°	453.0	460.2	471.7	470.8	465.1
55°	419.6	416.8	427.8	424.9	424.7
57.5°	379.6	384.4	393.4	388.8	381.4
60°	342.1	342.2	345.5	340.2	339.3
62.5°	300.3	301.8	302.5	296.0	306.5
65°	257.8	254.4	264.4	254.3	256.0
67.5°	218.7	220.4	219.4	213.1	215.5
70°	179.0	181.2	179.6	172.4	174.6
72.5°	142.7	140.0	141.7	132.7	136.9
75°	107.3	105.1	107.0	99.5	102.9
77.5°	73.1	74.8	73.6	69.5	71.8
80°	48.2	46.9	46.9	44.6	45.1
82.5°	28.1	26.8	26.4	25.7	26.8
85°	13.2	12.8	13.0	12.7	12.2
87.5°	4.7	4.9	4.9	4.6	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)