

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: P559077

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-93-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559077  
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-LD4-2HI-35-UNV-93-86-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

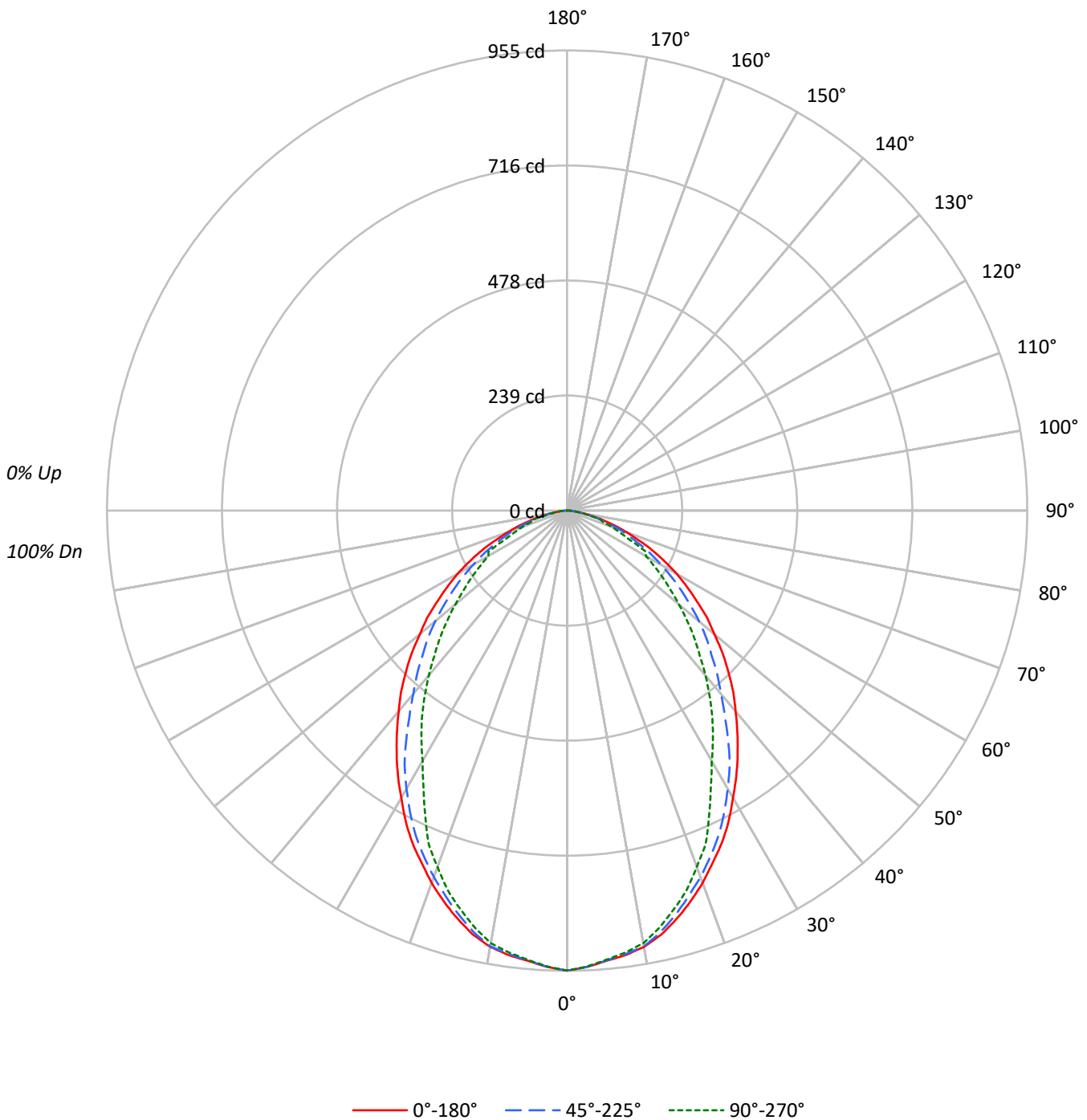
Lumens per Lamp: N/A  
Luminaire Lumens: 1874.0 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	10275	10275	10275
5°	10135	10123	10111
10°	10048	10036	9964
15°	9776	9678	9543
20°	9418	9266	9013
25°	9031	8834	8284
30°	8559	8285	7461
35°	8106	7657	6903
40°	7645	6978	6280
45°	7206	6451	5678
50°	6671	5988	5064
55°	6172	5425	4536
60°	5655	4846	4062
65°	4974	4243	3599
70°	4098	3717	3056
75°	3261	2845	2982
80°	2188	2052	1915
85°	1359	1630	1914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7206 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.9	4.7
10°-20°	243.9	13.0
20°-30°	337.6	18.0
30°-40°	360.0	19.2
40°-50°	328.4	17.5
50°-60°	257.3	13.7
60°-70°	167.7	8.9
70°-80°	74.3	4.0
80°-90°	15.9	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°	670.4	35.8
0°-40°	1030.3	55.0
0°-60°	1616.1	86.2
0°-90°	1874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1874.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	955	955	955	955	955	
5°	938	937	937	936	936	89
15°	877	877	868	860	856	247
25°	760	756	744	717	698	349
35°	617	612	583	538	525	386
45°	473	464	424	388	373	365
55°	329	319	289	255	242	295
65°	195	184	167	170	141	192
75°	78	73	68	65	72	84
85°	11	12	13	14	16	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	954.6	954.6	954.6	954.6	954.6
2.5°	948.0	948.0	948.0	946.9	946.9
5°	938.0	936.9	936.9	935.8	935.8
7.5°	930.3	929.2	928.1	927.0	924.8
10°	919.3	919.3	918.2	912.7	911.6
12.5°	901.6	900.5	896.1	888.4	886.2
15°	877.3	877.3	868.5	859.7	856.4
17.5°	850.9	849.8	838.7	829.9	825.5
20°	822.2	820.0	808.9	794.6	786.8
22.5°	790.2	790.2	776.9	758.2	750.4
25°	760.4	755.9	743.8	717.3	697.5
27.5°	726.2	719.5	706.3	668.8	645.6
30°	688.6	685.3	666.6	618.0	600.3
32.5°	653.3	647.8	627.9	577.2	562.8
35°	616.9	612.5	582.7	538.5	525.3
37.5°	580.5	575.0	537.4	502.1	485.6
40°	544.1	537.4	496.6	464.6	446.9
42.5°	509.9	501.0	461.3	427.1	407.2
45°	473.4	463.5	423.8	388.5	373.0
47.5°	437.0	428.2	391.8	355.4	337.7
50°	398.4	390.7	357.6	321.1	302.4
52.5°	366.4	354.2	322.2	285.8	270.4
55°	328.9	318.9	289.1	254.9	241.7
57.5°	294.7	284.7	257.1	225.1	214.1
60°	262.7	248.3	225.1	197.5	188.7
62.5°	227.3	216.3	196.4	173.3	184.3
65°	195.3	184.3	166.6	170.0	141.3
67.5°	160.0	154.5	139.1	123.6	119.2
70°	130.2	123.6	118.1	101.5	97.1
72.5°	103.7	97.1	89.4	80.6	77.3
75°	78.4	72.8	68.4	65.1	71.7
77.5°	54.1	51.9	48.6	45.2	44.1
80°	35.3	34.2	33.1	32.0	30.9
82.5°	21.0	21.0	21.0	21.0	21.0
85°	11.0	12.1	13.2	14.3	15.5
87.5°	6.6	6.6	7.7	8.8	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)