

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: P558505

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-93-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558505  
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-93-88-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

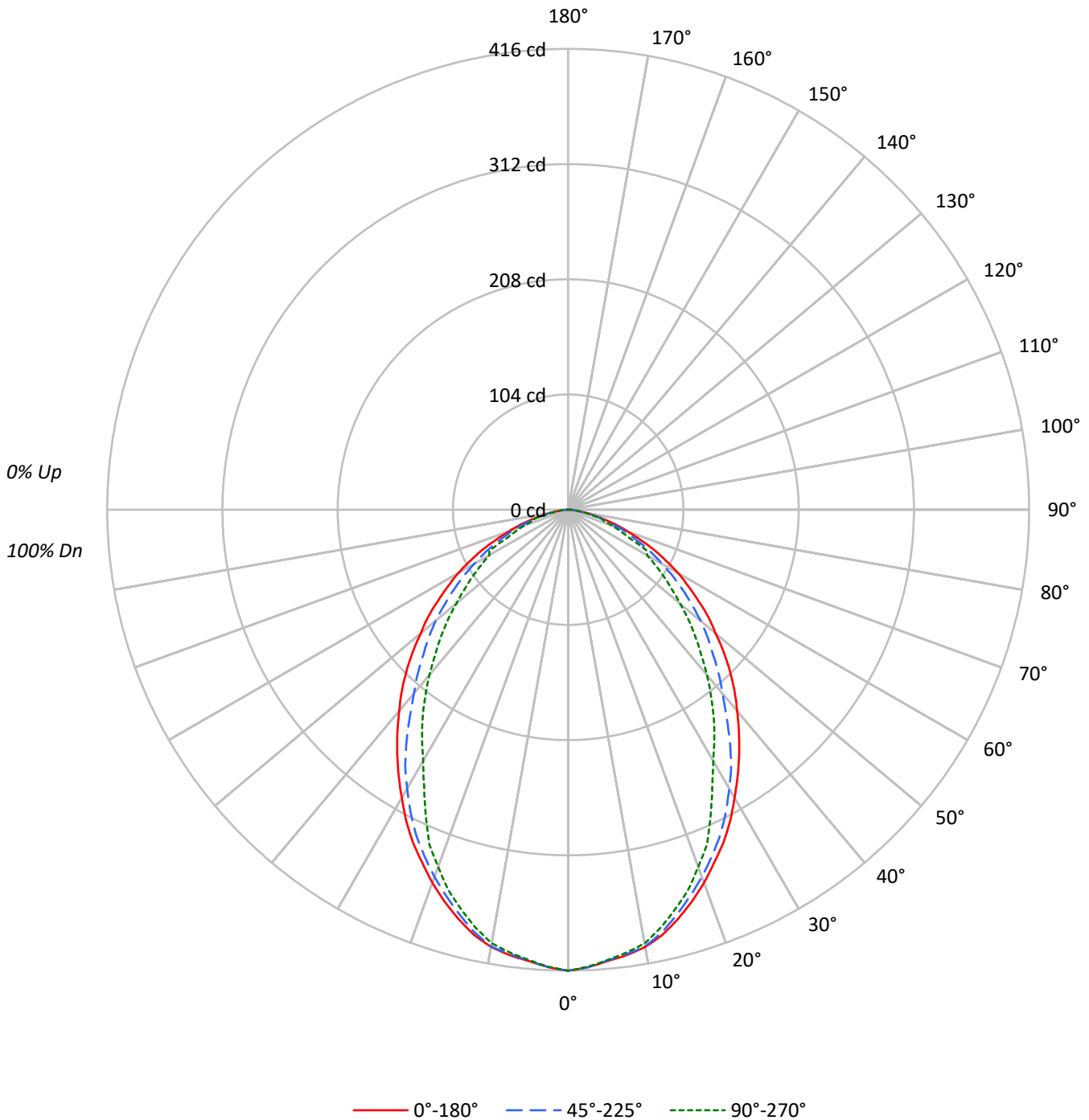
Lumens per Lamp: N/A  
Luminaire Lumens: 817.0 lumens  
Efficiency: N/A  
Efficacy: 75.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4480	4480	4480
5°	4419	4414	4408
10°	4381	4375	4344
15°	4262	4219	4160
20°	4105	4040	3929
25°	3937	3852	3612
30°	3731	3612	3253
35°	3533	3338	3009
40°	3333	3042	2739
45°	3142	2813	2475
50°	2909	2611	2207
55°	2691	2366	1978
60°	2465	2112	1772
65°	2170	1849	1569
70°	1788	1621	1331
75°	1422	1239	1302
80°	955	893	837
85°	593	716	827

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3142 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	4.7
10°-20°	106.3	13.0
20°-30°	147.2	18.0
30°-40°	156.9	19.2
40°-50°	143.2	17.5
50°-60°	112.2	13.7
60°-70°	73.1	8.9
70°-80°	32.4	4.0
80°-90°	6.9	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°	292.3	35.8
0°-40°	449.2	55.0
0°-60°	704.6	86.2
0°-90°	817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	817.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	416	416	416	416	416	
5°	409	408	408	408	408	39
15°	382	382	379	375	373	108
25°	332	330	324	313	304	152
35°	269	267	254	235	229	168
45°	206	202	185	169	163	159
55°	143	139	126	111	105	129
65°	85	80	73	74	62	84
75°	34	32	30	28	31	37
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°	416.2	416.2	416.2	416.2	416.2
2.5°	413.3	413.3	413.3	412.8	412.8
5°	409.0	408.5	408.5	408.0	408.0
7.5°	405.6	405.1	404.6	404.1	403.2
10°	400.8	400.8	400.3	397.9	397.4
12.5°	393.1	392.6	390.7	387.3	386.3
15°	382.5	382.5	378.6	374.8	373.3
17.5°	370.9	370.5	365.7	361.8	359.9
20°	358.4	357.5	352.7	346.4	343.0
22.5°	344.5	344.5	338.7	330.5	327.2
25°	331.5	329.6	324.3	312.7	304.1
27.5°	316.6	313.7	307.9	291.6	281.5
30°	300.2	298.8	290.6	269.4	261.7
32.5°	284.8	282.4	273.8	251.6	245.4
35°	268.9	267.0	254.0	234.8	229.0
37.5°	253.1	250.7	234.3	218.9	211.7
40°	237.2	234.3	216.5	202.6	194.9
42.5°	222.3	218.4	201.1	186.2	177.5
45°	206.4	202.1	184.8	169.4	162.6
47.5°	190.5	186.7	170.8	154.9	147.2
50°	173.7	170.3	155.9	140.0	131.8
52.5°	159.7	154.4	140.5	124.6	117.9
55°	143.4	139.0	126.1	111.1	105.4
57.5°	128.5	124.1	112.1	98.1	93.3
60°	114.5	108.3	98.1	86.1	82.3
62.5°	99.1	94.3	85.6	75.5	80.3
65°	85.2	80.3	72.6	74.1	61.6
67.5°	69.8	67.4	60.6	53.9	52.0
70°	56.8	53.9	51.5	44.3	42.3
72.5°	45.2	42.3	39.0	35.1	33.7
75°	34.2	31.8	29.8	28.4	31.3
77.5°	23.6	22.6	21.2	19.7	19.2
80°	15.4	14.9	14.4	14.0	13.5
82.5°	9.1	9.1	9.1	9.1	9.1
85°	4.8	5.3	5.8	6.3	6.7
87.5°	2.9	2.9	3.4	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)