

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: P559841

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-93-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559841  
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-12-2-LD4-1LO-35-UNV-93-84-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

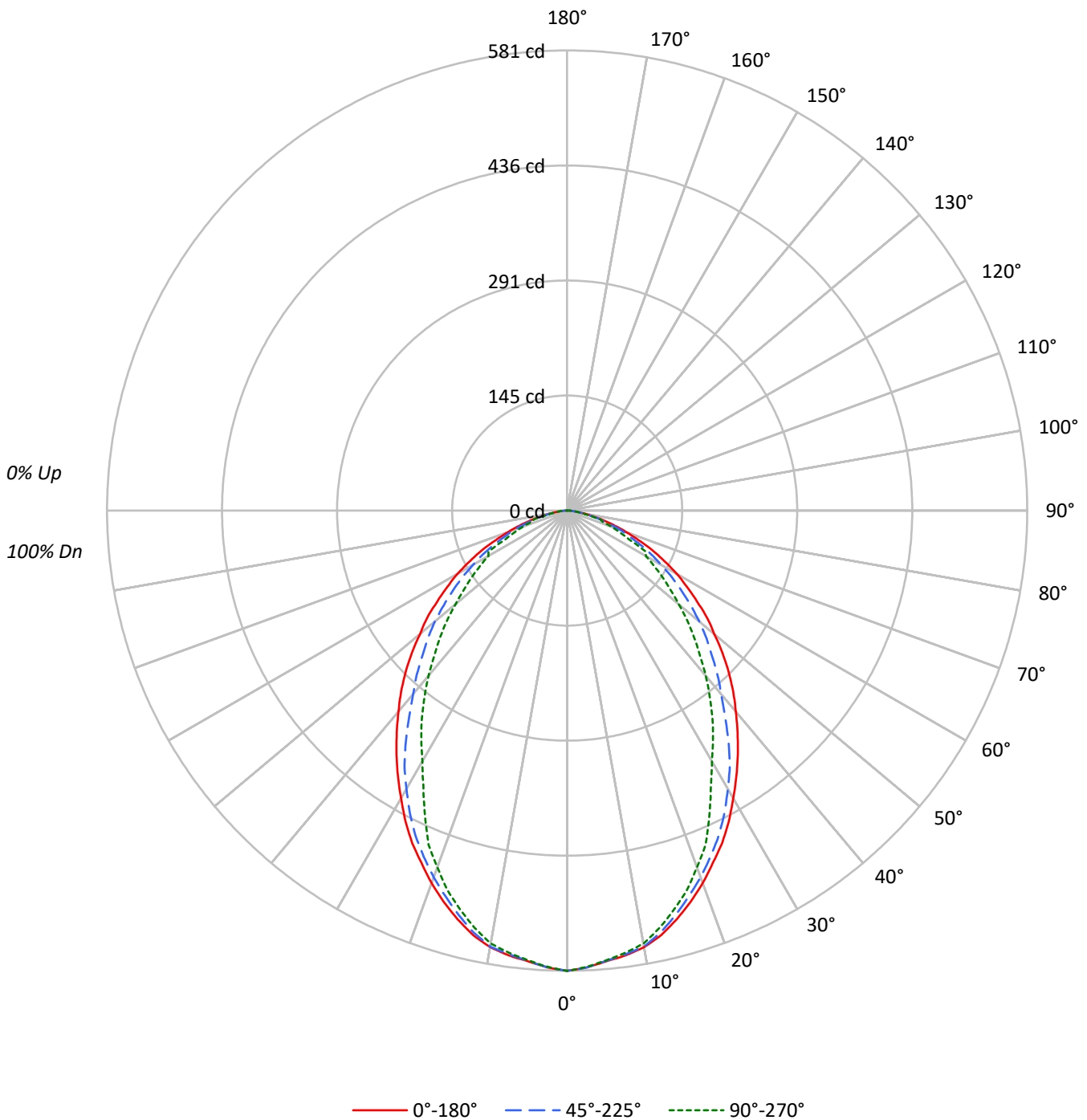
Lumens per Lamp: N/A  
Luminaire Lumens: 1141.0 lumens  
Efficiency: N/A  
Efficacy: 97.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3128	3128	3128
5°	3085	3082	3078
10°	3059	3055	3033
15°	2976	2946	2905
20°	2867	2821	2744
25°	2749	2689	2522
30°	2606	2522	2271
35°	2468	2331	2101
40°	2328	2125	1912
45°	2194	1964	1729
50°	2031	1823	1541
55°	1879	1651	1381
60°	1721	1476	1237
65°	1514	1293	1095
70°	1248	1131	930
75°	992	867	909
80°	666	626	583
85°	414	500	580

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2194 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.1	4.7
10°-20°	148.5	13.0
20°-30°	205.6	18.0
30°-40°	219.2	19.2
40°-50°	200.0	17.5
50°-60°	156.7	13.7
60°-70°	102.1	8.9
70°-80°	45.2	4.0
80°-90°	9.7	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°	408.1	35.8
0°-40°	627.3	55.0
0°-60°	984.0	86.2
0°-90°	1141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1141.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	581	581	581	581	581	
5°	571	570	570	570	570	54
15°	534	534	529	523	521	150
25°	463	460	453	437	425	213
35°	376	373	355	328	320	235
45°	288	282	258	236	227	222
55°	200	194	176	155	147	180
65°	119	112	102	104	86	117
75°	48	44	42	40	44	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	581.2	581.2	581.2	581.2	581.2
2.5°	577.2	577.2	577.2	576.5	576.5
5°	571.1	570.5	570.5	569.8	569.8
7.5°	566.4	565.8	565.1	564.4	563.1
10°	559.7	559.7	559.0	555.7	555.0
12.5°	549.0	548.3	545.6	540.9	539.6
15°	534.2	534.2	528.8	523.4	521.4
17.5°	518.0	517.4	510.7	505.3	502.6
20°	500.6	499.2	492.5	483.8	479.1
22.5°	481.1	481.1	473.0	461.6	456.9
25°	463.0	460.3	452.9	436.7	424.7
27.5°	442.1	438.1	430.0	407.2	393.1
30°	419.3	417.3	405.8	376.3	365.5
32.5°	397.8	394.4	382.3	351.4	342.7
35°	375.6	372.9	354.8	327.9	319.8
37.5°	353.4	350.1	327.2	305.7	295.6
40°	331.3	327.2	302.4	282.9	272.1
42.5°	310.4	305.1	280.9	260.0	247.9
45°	288.3	282.2	258.0	236.5	227.1
47.5°	266.1	260.7	238.5	216.4	205.6
50°	242.6	237.9	217.7	195.5	184.1
52.5°	223.1	215.7	196.2	174.0	164.6
55°	200.2	194.2	176.0	155.2	147.2
57.5°	179.4	173.4	156.6	137.1	130.4
60°	159.9	151.2	137.1	120.3	114.9
62.5°	138.4	131.7	119.6	105.5	112.2
65°	118.9	112.2	101.5	103.5	86.0
67.5°	97.4	94.1	84.7	75.3	72.6
70°	79.3	75.3	71.9	61.8	59.1
72.5°	63.2	59.1	54.4	49.1	47.0
75°	47.7	44.3	41.7	39.6	43.7
77.5°	32.9	31.6	29.6	27.5	26.9
80°	21.5	20.8	20.2	19.5	18.8
82.5°	12.8	12.8	12.8	12.8	12.8
85°	6.7	7.4	8.1	8.7	9.4
87.5°	4.0	4.0	4.7	5.4	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)