

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: P559329

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559329  
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-LD4-2LO-40-UNV-93-84-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

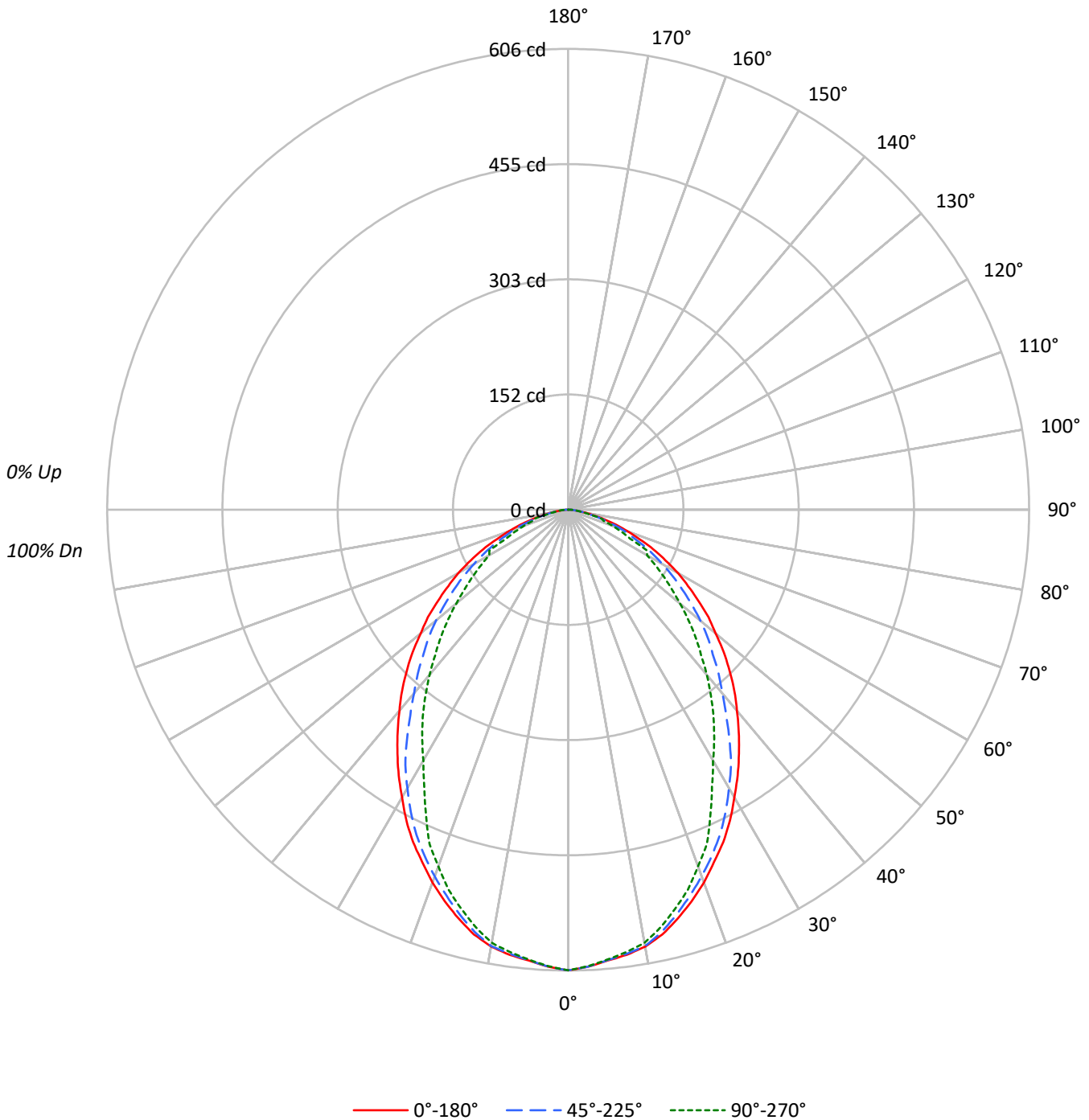
Lumens per Lamp: N/A  
Luminaire Lumens: 1189.0 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6520	6520	6520
5°	6431	6424	6416
10°	6375	6368	6322
15°	6203	6140	6054
20°	5975	5879	5718
25°	5729	5605	5255
30°	5430	5256	4734
35°	5143	4858	4380
40°	4851	4428	3985
45°	4573	4093	3603
50°	4233	3800	3213
55°	3917	3442	2877
60°	3587	3074	2577
65°	3156	2692	2282
70°	2600	2357	1939
75°	2067	1805	1892
80°	1389	1302	1215
85°	865	1037	1210

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4573 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.4	4.7
10°-20°	154.7	13.0
20°-30°	214.2	18.0
30°-40°	228.4	19.2
40°-50°	208.4	17.5
50°-60°	163.2	13.7
60°-70°	106.4	8.9
70°-80°	47.1	4.0
80°-90°	10.1	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°	425.3	35.8
0°-40°	653.7	55.0
0°-60°	1025.3	86.2
0°-90°	1189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1189.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	595	594	594	594	594	56
15°	557	557	551	545	543	156
25°	482	480	472	455	442	221
35°	391	389	370	342	333	245
45°	300	294	269	246	237	231
55°	209	202	183	162	153	187
65°	124	117	106	108	90	122
75°	50	46	43	41	46	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	605.7	605.7	605.7	605.7	605.7
2.5°	601.5	601.5	601.5	600.8	600.8
5°	595.2	594.5	594.5	593.8	593.8
7.5°	590.3	589.6	588.9	588.2	586.8
10°	583.3	583.3	582.6	579.1	578.4
12.5°	572.1	571.4	568.6	563.6	562.2
15°	556.6	556.6	551.0	545.4	543.3
17.5°	539.8	539.1	532.1	526.5	523.7
20°	521.6	520.2	513.2	504.1	499.2
22.5°	501.3	501.3	492.9	481.0	476.1
25°	482.4	479.6	471.9	455.1	442.5
27.5°	460.7	456.5	448.1	424.3	409.6
30°	436.9	434.8	422.9	392.1	380.9
32.5°	414.5	411.0	398.4	366.2	357.1
35°	391.4	388.6	369.7	341.7	333.3
37.5°	368.3	364.8	341.0	318.6	308.1
40°	345.2	341.0	315.1	294.8	283.6
42.5°	323.5	317.9	292.7	271.0	258.4
45°	300.4	294.1	268.9	246.5	236.7
47.5°	277.3	271.7	248.6	225.5	214.3
50°	252.8	247.9	226.9	203.8	191.9
52.5°	232.5	224.8	204.5	181.3	171.5
55°	208.7	202.4	183.4	161.7	153.3
57.5°	186.9	180.6	163.1	142.8	135.8
60°	166.6	157.5	142.8	125.3	119.7
62.5°	144.2	137.2	124.6	109.9	116.9
65°	123.9	116.9	105.7	107.8	89.6
67.5°	101.5	98.0	88.2	78.4	75.6
70°	82.6	78.4	74.9	64.4	61.6
72.5°	65.8	61.6	56.7	51.1	49.0
75°	49.7	46.2	43.4	41.3	45.5
77.5°	34.3	32.9	30.8	28.7	28.0
80°	22.4	21.7	21.0	20.3	19.6
82.5°	13.3	13.3	13.3	13.3	13.3
85°	7.0	7.7	8.4	9.1	9.8
87.5°	4.2	4.2	4.9	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)