

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: P560679

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560679  
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-LD4-2STD-40-UNV-93-87-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

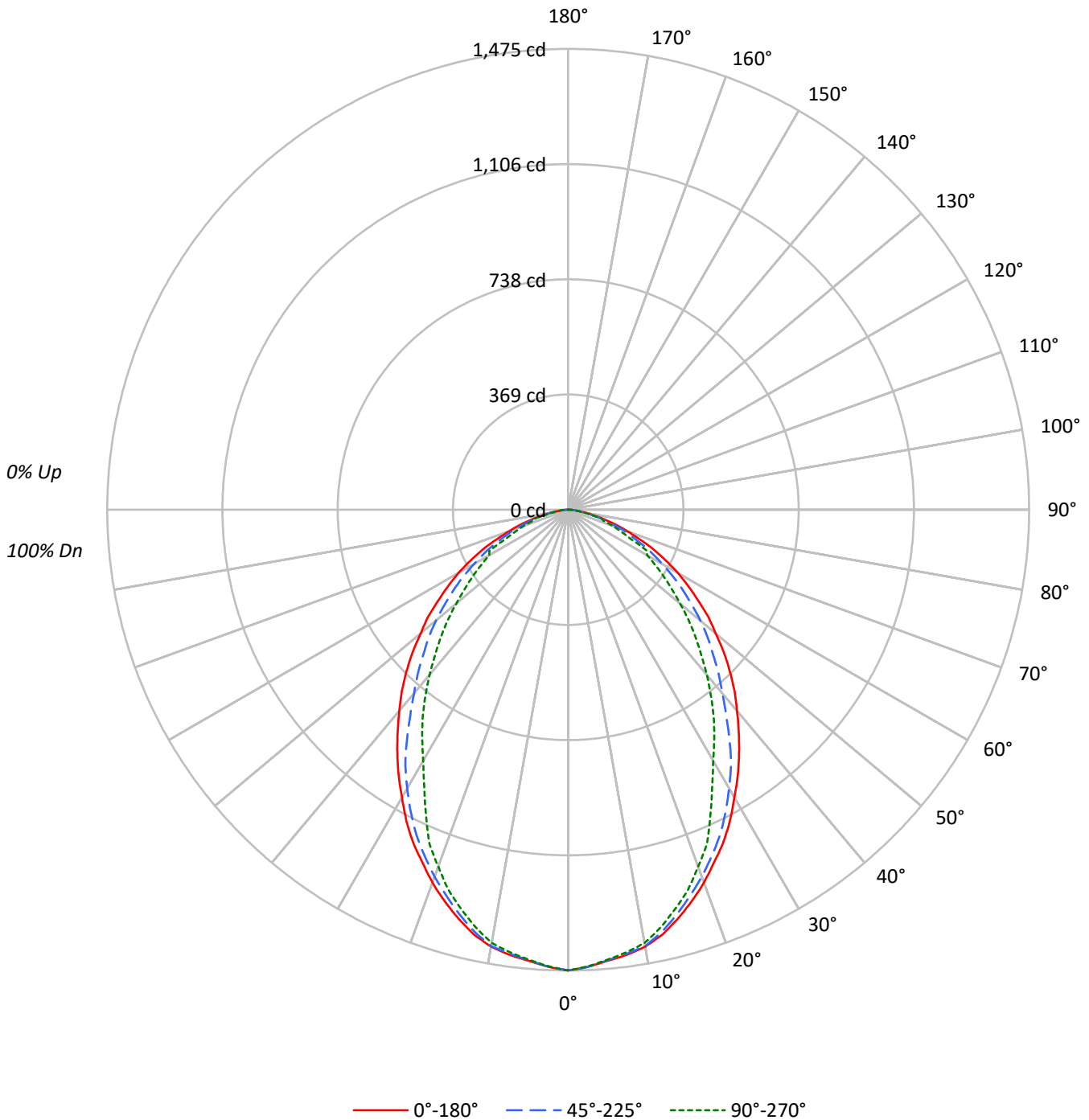
Lumens per Lamp: N/A  
Luminaire Lumens: 2895.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7937	7937	7937
5°	7829	7820	7810
10°	7761	7752	7696
15°	7551	7476	7371
20°	7274	7157	6962
25°	6975	6824	6398
30°	6611	6399	5763
35°	6261	5914	5332
40°	5905	5390	4851
45°	5567	4983	4386
50°	5153	4625	3911
55°	4767	4191	3504
60°	4367	3744	3138
65°	3843	3278	2779
70°	3166	2870	2360
75°	2516	2198	2304
80°	1692	1584	1478
85°	1050	1266	1476

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5567 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.3	4.7
10°-20°	376.7	13.0
20°-30°	521.6	18.0
30°-40°	556.1	19.2
40°-50°	507.4	17.5
50°-60°	397.5	13.7
60°-70°	259.0	8.9
70°-80°	114.8	4.0
80°-90°	24.6	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°	1035.6	35.8
0°-40°	1591.7	55.0
0°-60°	2496.5	86.2
0°-90°	2895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2895.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1475	1475	1475	1475	1475	
5°	1449	1447	1447	1446	1446	138
15°	1355	1355	1342	1328	1323	381
25°	1175	1168	1149	1108	1077	539
35°	953	946	900	832	812	596
45°	731	716	655	600	576	563
55°	508	493	447	394	373	456
65°	302	285	257	262	218	297
75°	121	112	106	101	111	130
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1474.7	1474.7	1474.7	1474.7	1474.7
2.5°	1464.4	1464.4	1464.4	1462.7	1462.7
5°	1449.1	1447.4	1447.4	1445.7	1445.7
7.5°	1437.2	1435.5	1433.8	1432.1	1428.6
10°	1420.1	1420.1	1418.4	1409.9	1408.2
12.5°	1392.8	1391.1	1384.3	1372.4	1369.0
15°	1355.3	1355.3	1341.7	1328.1	1322.9
17.5°	1314.4	1312.7	1295.7	1282.0	1275.2
20°	1270.1	1266.7	1249.6	1227.5	1215.5
22.5°	1220.7	1220.7	1200.2	1171.2	1159.3
25°	1174.6	1167.8	1149.1	1108.1	1077.4
27.5°	1121.8	1111.5	1091.1	1033.1	997.3
30°	1063.8	1058.7	1029.7	954.7	927.4
32.5°	1009.3	1000.7	970.0	891.6	869.5
35°	953.0	946.2	900.1	832.0	811.5
37.5°	896.7	888.2	830.3	775.7	750.1
40°	840.5	830.3	767.2	717.7	690.5
42.5°	787.6	774.0	712.6	659.8	629.1
45°	731.4	716.0	654.7	600.1	576.2
47.5°	675.1	661.5	605.2	549.0	521.7
50°	615.4	603.5	552.4	496.1	467.1
52.5°	566.0	547.2	497.8	441.5	417.7
55°	508.0	492.7	446.7	393.8	373.4
57.5°	455.2	439.8	397.2	347.8	330.7
60°	405.7	383.6	347.8	305.2	291.5
62.5°	351.2	334.1	303.5	267.7	284.7
65°	301.8	284.7	257.4	262.5	218.2
67.5°	247.2	238.7	214.8	190.9	184.1
70°	201.2	190.9	182.4	156.8	150.0
72.5°	160.3	150.0	138.1	124.5	119.3
75°	121.0	112.5	105.7	100.6	110.8
77.5°	83.5	80.1	75.0	69.9	68.2
80°	54.6	52.8	51.1	49.4	47.7
82.5°	32.4	32.4	32.4	32.4	32.4
85°	17.0	18.8	20.5	22.2	23.9
87.5°	10.2	10.2	11.9	13.6	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)