

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: P560719

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-81-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560719  
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-50-UNV-81-97-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

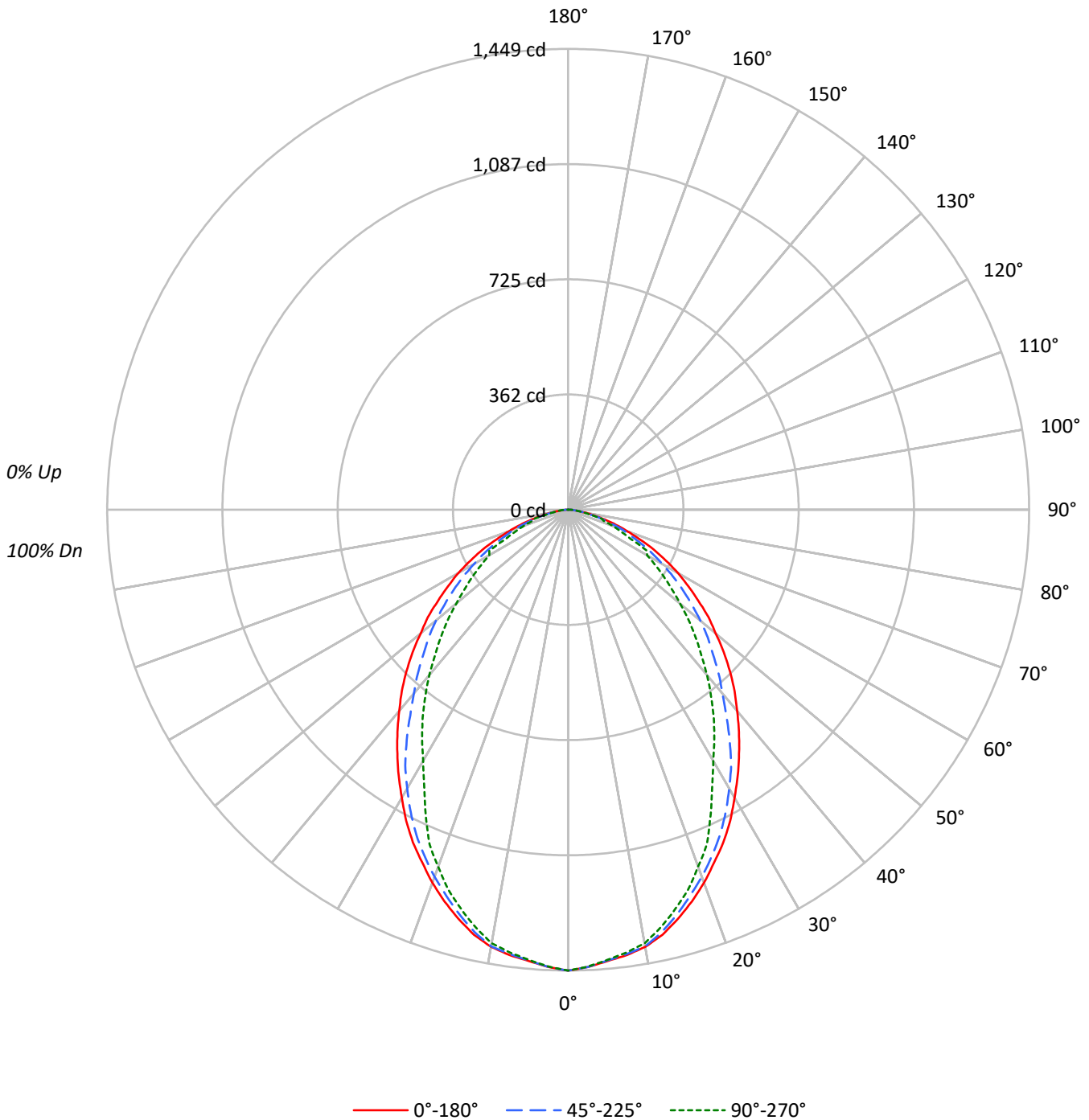
Lumens per Lamp: N/A  
Luminaire Lumens: 2845.0 lumens  
Efficiency: N/A  
Efficacy: 85.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7800	7800	7800
5°	7694	7685	7675
10°	7627	7618	7563
15°	7421	7346	7244
20°	7149	7034	6841
25°	6855	6706	6288
30°	6497	6289	5664
35°	6153	5812	5240
40°	5803	5297	4767
45°	5470	4896	4310
50°	5064	4545	3844
55°	4685	4118	3443
60°	4292	3679	3084
65°	3776	3222	2730
70°	3111	2821	2319
75°	2475	2161	2264
80°	1661	1559	1454
85°	1037	1241	1451

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5470 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.9	4.7
10°-20°	370.2	13.0
20°-30°	512.6	18.0
30°-40°	546.5	19.2
40°-50°	498.6	17.5
50°-60°	390.6	13.7
60°-70°	254.6	8.9
70°-80°	112.8	4.0
80°-90°	24.2	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°	1017.7	35.8
0°-40°	1564.2	55.0
0°-60°	2453.4	86.2
0°-90°	2845.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2845.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1449	1449	1449	1449	1449	
5°	1424	1422	1422	1421	1421	135
15°	1332	1332	1318	1305	1300	374
25°	1154	1148	1129	1089	1059	530
35°	936	930	885	818	798	586
45°	719	704	643	590	566	554
55°	499	484	439	387	367	448
65°	296	280	253	258	214	292
75°	119	111	104	99	109	128
85°	17	18	20	22	24	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1449.2	1449.2	1449.2	1449.2	1449.2
2.5°	1439.2	1439.2	1439.2	1437.5	1437.5
5°	1424.1	1422.4	1422.4	1420.7	1420.7
7.5°	1412.3	1410.7	1409.0	1407.3	1404.0
10°	1395.6	1395.6	1393.9	1385.5	1383.9
12.5°	1368.8	1367.1	1360.4	1348.7	1345.3
15°	1331.9	1331.9	1318.5	1305.1	1300.1
17.5°	1291.7	1290.0	1273.3	1259.9	1253.2
20°	1248.2	1244.8	1228.1	1206.3	1194.5
22.5°	1199.6	1199.6	1179.5	1151.0	1139.3
25°	1154.3	1147.6	1129.2	1089.0	1058.8
27.5°	1102.4	1092.3	1072.2	1015.3	980.1
30°	1045.4	1040.4	1011.9	938.2	911.4
32.5°	991.8	983.4	953.3	876.2	854.4
35°	936.5	929.8	884.6	817.6	797.5
37.5°	881.3	872.9	815.9	762.3	737.2
40°	826.0	815.9	753.9	705.3	678.5
42.5°	774.0	760.6	700.3	648.4	618.2
45°	718.7	703.7	643.3	589.7	566.3
47.5°	663.5	650.0	594.8	539.5	512.7
50°	604.8	593.1	542.8	487.5	459.1
52.5°	556.2	537.8	489.2	433.9	410.5
55°	499.3	484.2	438.9	387.0	366.9
57.5°	447.3	432.2	390.4	341.8	325.0
60°	398.7	377.0	341.8	299.9	286.5
62.5°	345.1	328.4	298.2	263.0	279.8
65°	296.5	279.8	253.0	258.0	214.4
67.5°	242.9	234.6	211.1	187.6	180.9
70°	197.7	187.6	179.3	154.1	147.4
72.5°	157.5	147.4	135.7	122.3	117.3
75°	119.0	110.6	103.9	98.8	108.9
77.5°	82.1	78.7	73.7	68.7	67.0
80°	53.6	51.9	50.3	48.6	46.9
82.5°	31.8	31.8	31.8	31.8	31.8
85°	16.8	18.4	20.1	21.8	23.5
87.5°	10.1	10.1	11.7	13.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)