

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: P560587

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-81-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560587  
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-35-UNV-81-94-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

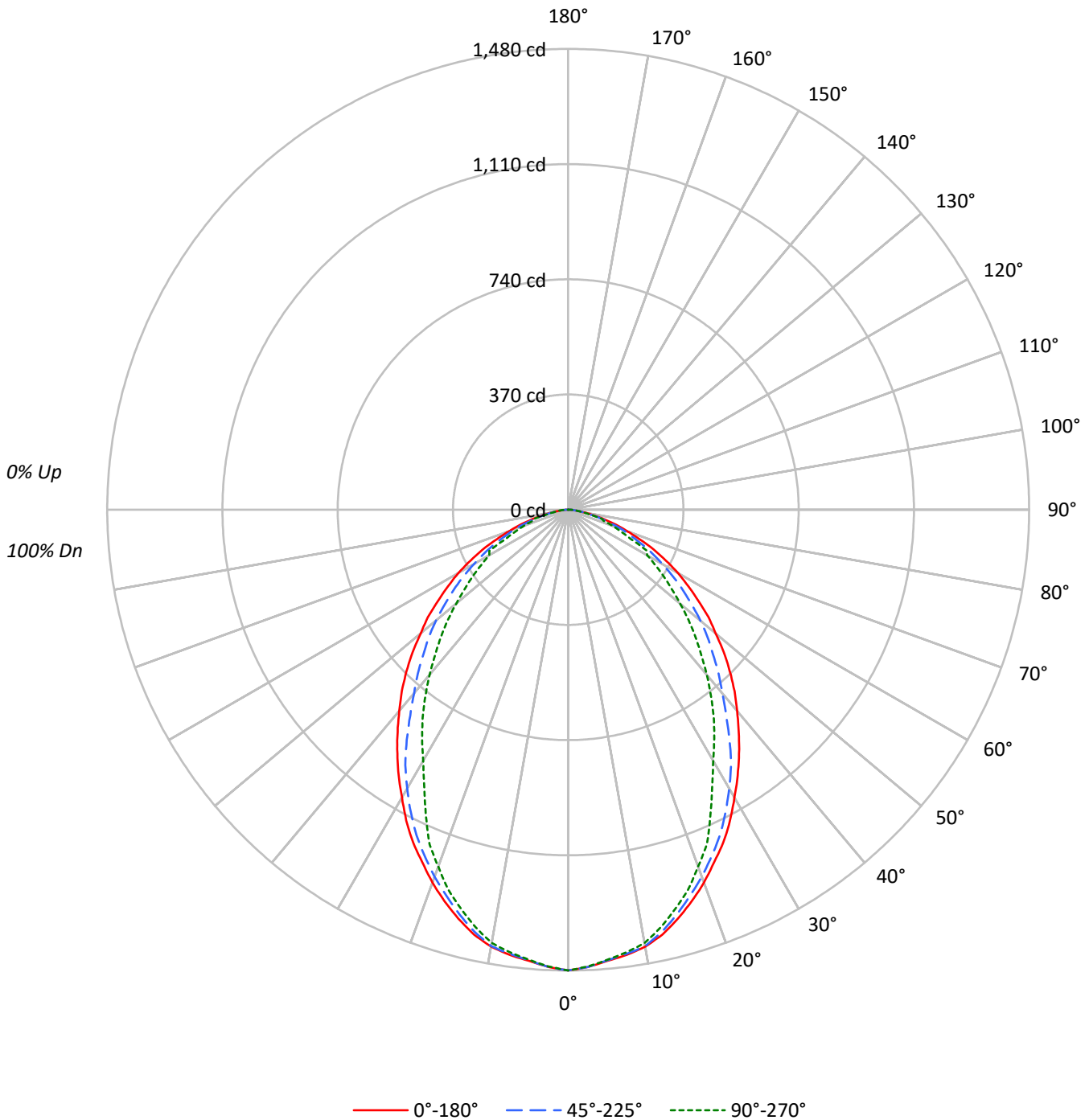
Lumens per Lamp: N/A  
Luminaire Lumens: 2905.0 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7964	7964	7964
5°	7856	7847	7837
10°	7788	7778	7723
15°	7578	7501	7397
20°	7300	7182	6986
25°	7000	6847	6421
30°	6634	6421	5783
35°	6283	5935	5350
40°	5925	5408	4867
45°	5586	5000	4401
50°	5171	4641	3924
55°	4784	4206	3515
60°	4383	3757	3148
65°	3856	3289	2789
70°	3177	2880	2368
75°	2527	2206	2312
80°	1695	1590	1485
85°	1056	1266	1482

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5586 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.7	4.7
10°-20°	378.0	13.0
20°-30°	523.4	18.0
30°-40°	558.1	19.2
40°-50°	509.1	17.5
50°-60°	398.9	13.7
60°-70°	260.0	8.9
70°-80°	115.2	4.0
80°-90°	24.7	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°	1039.1	35.8
0°-40°	1597.2	55.0
0°-60°	2505.2	86.2
0°-90°	2905.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2905.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1480	1480	1480	1480	1480	
5°	1454	1452	1452	1451	1451	138
15°	1360	1360	1346	1333	1328	382
25°	1179	1172	1153	1112	1081	541
35°	956	949	903	835	814	598
45°	734	718	657	602	578	565
55°	510	494	448	395	375	457
65°	303	286	258	264	219	298
75°	122	113	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°	1479.8	1479.8	1479.8	1479.8	1479.8
2.5°	1469.5	1469.5	1469.5	1467.8	1467.8
5°	1454.1	1452.4	1452.4	1450.7	1450.7
7.5°	1442.1	1440.4	1438.7	1437.0	1433.6
10°	1425.0	1425.0	1423.3	1414.8	1413.1
12.5°	1397.7	1395.9	1389.1	1377.1	1373.7
15°	1360.0	1360.0	1346.3	1332.6	1327.5
17.5°	1319.0	1317.3	1300.1	1286.5	1279.6
20°	1274.5	1271.1	1254.0	1231.7	1219.7
22.5°	1224.9	1224.9	1204.3	1175.3	1163.3
25°	1178.7	1171.8	1153.0	1112.0	1081.2
27.5°	1125.7	1115.4	1094.9	1036.7	1000.8
30°	1067.5	1062.4	1033.3	958.0	930.6
32.5°	1012.7	1004.2	973.4	894.7	872.5
35°	956.3	949.4	903.3	834.8	814.3
37.5°	899.8	891.3	833.1	778.4	752.7
40°	843.4	833.1	769.8	720.2	692.8
42.5°	790.4	776.7	715.1	662.0	631.3
45°	733.9	718.5	656.9	602.2	578.2
47.5°	677.4	663.8	607.3	550.9	523.5
50°	617.6	605.6	554.3	497.8	468.7
52.5°	568.0	549.1	499.5	443.1	419.1
55°	509.8	494.4	448.2	395.2	374.6
57.5°	456.8	441.4	398.6	349.0	331.9
60°	407.2	384.9	349.0	306.2	292.5
62.5°	352.4	335.3	304.5	268.6	285.7
65°	302.8	285.7	258.3	263.5	219.0
67.5°	248.1	239.5	215.6	191.6	184.8
70°	201.9	191.6	183.0	157.4	150.5
72.5°	160.8	150.5	138.6	124.9	119.8
75°	121.5	112.9	106.1	100.9	111.2
77.5°	83.8	80.4	75.3	70.1	68.4
80°	54.7	53.0	51.3	49.6	47.9
82.5°	32.5	32.5	32.5	32.5	32.5
85°	17.1	18.8	20.5	22.2	24.0
87.5°	10.3	10.3	12.0	13.7	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)