

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: P560623

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-93-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560623  
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-93-97-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

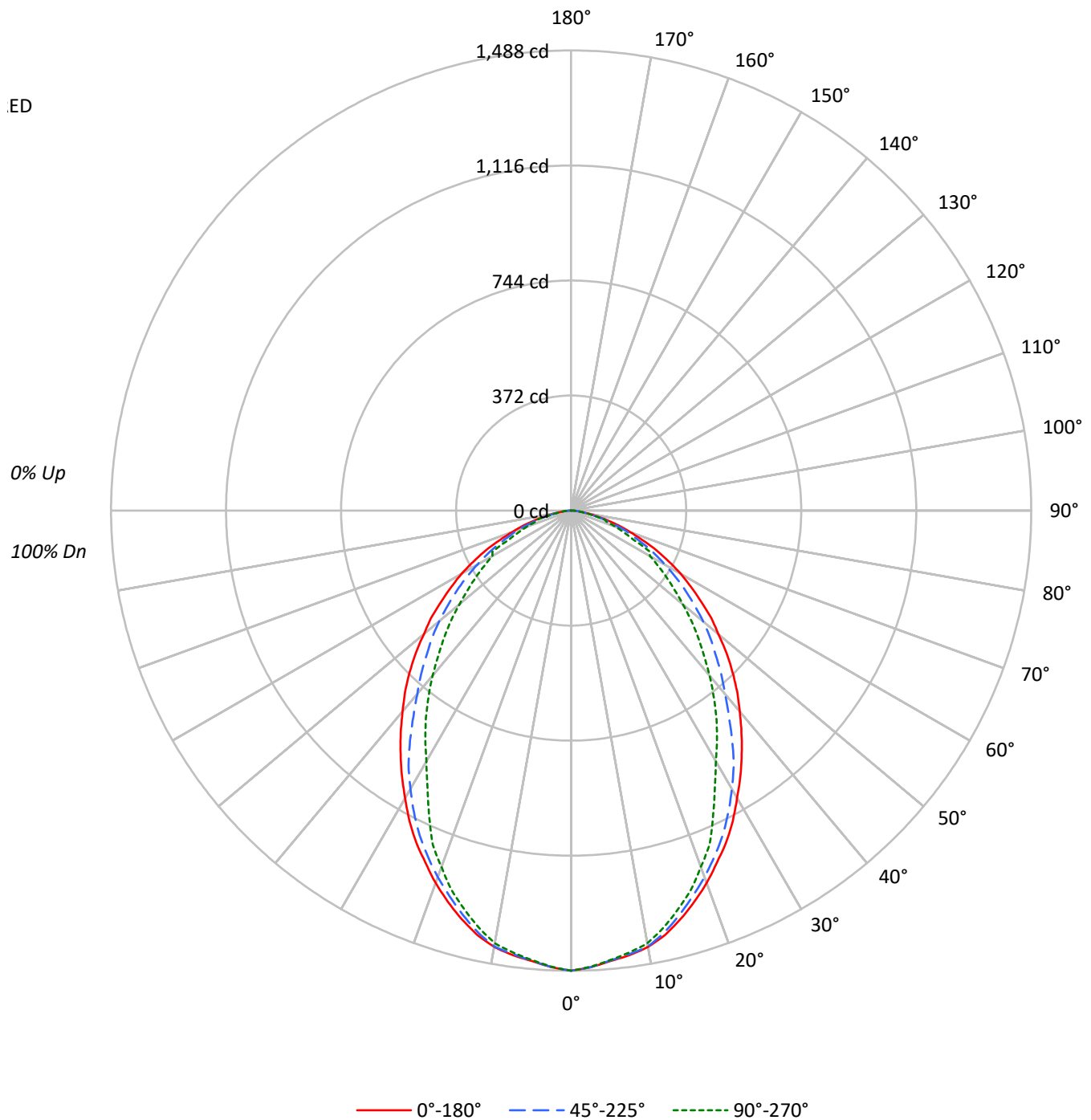
Lumens per Lamp: N/A  
Luminaire Lumens: 2921.0 lumens  
Efficiency: N/A  
Efficacy: 87.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8008	8008	8008
5°	7899	7890	7881
10°	7831	7821	7765
15°	7619	7543	7437
20°	7340	7222	7025
25°	7038	6885	6456
30°	6671	6457	5816
35°	6318	5967	5380
40°	5958	5439	4895
45°	5616	5027	4425
50°	5200	4666	3946
55°	4810	4229	3535
60°	4407	3777	3166
65°	3878	3307	2804
70°	3194	2897	2382
75°	2539	2217	2325
80°	1705	1599	1494
85°	1062	1272	1488

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5616 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.5	4.7
10°-20°	380.1	13.0
20°-30°	526.2	18.0
30°-40°	561.1	19.2
40°-50°	511.9	17.5
50°-60°	401.0	13.7
60°-70°	261.4	8.9
70°-80°	115.8	4.0
80°-90°	24.9	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°	1044.9	35.8
0°-40°	1606.0	55.0
0°-60°	2519.0	86.2
0°-90°	2921.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2921.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1488	1488	1488	1488	1488	
5°	1462	1460	1460	1459	1459	139
15°	1368	1368	1354	1340	1335	384
25°	1185	1178	1159	1118	1087	544
35°	962	955	908	839	819	601
45°	738	722	660	606	581	568
55°	513	497	451	397	377	460
65°	304	287	260	265	220	300
75°	122	114	107	102	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1487.9	1487.9	1487.9	1487.9	1487.9
2.5°	1477.6	1477.6	1477.6	1475.9	1475.9
5°	1462.1	1460.4	1460.4	1458.7	1458.7
7.5°	1450.1	1448.4	1446.6	1444.9	1441.5
10°	1432.9	1432.9	1431.2	1422.6	1420.8
12.5°	1405.4	1403.6	1396.8	1384.7	1381.3
15°	1367.5	1367.5	1353.7	1340.0	1334.8
17.5°	1326.2	1324.5	1307.3	1293.5	1286.7
20°	1281.5	1278.1	1260.9	1238.5	1226.5
22.5°	1231.6	1231.6	1211.0	1181.7	1169.7
25°	1185.2	1178.3	1159.4	1118.1	1087.1
27.5°	1131.9	1121.5	1100.9	1042.4	1006.3
30°	1073.4	1068.2	1039.0	963.3	935.8
32.5°	1018.3	1009.7	978.8	899.6	877.3
35°	961.6	954.7	908.2	839.4	818.8
37.5°	904.8	896.2	837.7	782.7	756.9
40°	848.0	837.7	774.1	724.2	696.7
42.5°	794.7	780.9	719.0	665.7	634.7
45°	737.9	722.5	660.5	605.5	581.4
47.5°	681.2	667.4	610.6	553.9	526.4
50°	621.0	608.9	557.3	500.6	471.3
52.5°	571.1	552.2	502.3	445.5	421.4
55°	512.6	497.1	450.7	397.4	376.7
57.5°	459.3	443.8	400.8	350.9	333.7
60°	409.4	387.0	350.9	307.9	294.1
62.5°	354.3	337.1	306.2	270.1	287.3
65°	304.5	287.3	259.7	264.9	220.2
67.5°	249.4	240.8	216.7	192.7	185.8
70°	203.0	192.7	184.1	158.3	151.4
72.5°	161.7	151.4	139.3	125.6	120.4
75°	122.1	113.5	106.6	101.5	111.8
77.5°	84.3	80.8	75.7	70.5	68.8
80°	55.0	53.3	51.6	49.9	48.2
82.5°	32.7	32.7	32.7	32.7	32.7
85°	17.2	18.9	20.6	22.4	24.1
87.5°	10.3	10.3	12.0	13.8	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)