

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: P560621

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560621  
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-93-96-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

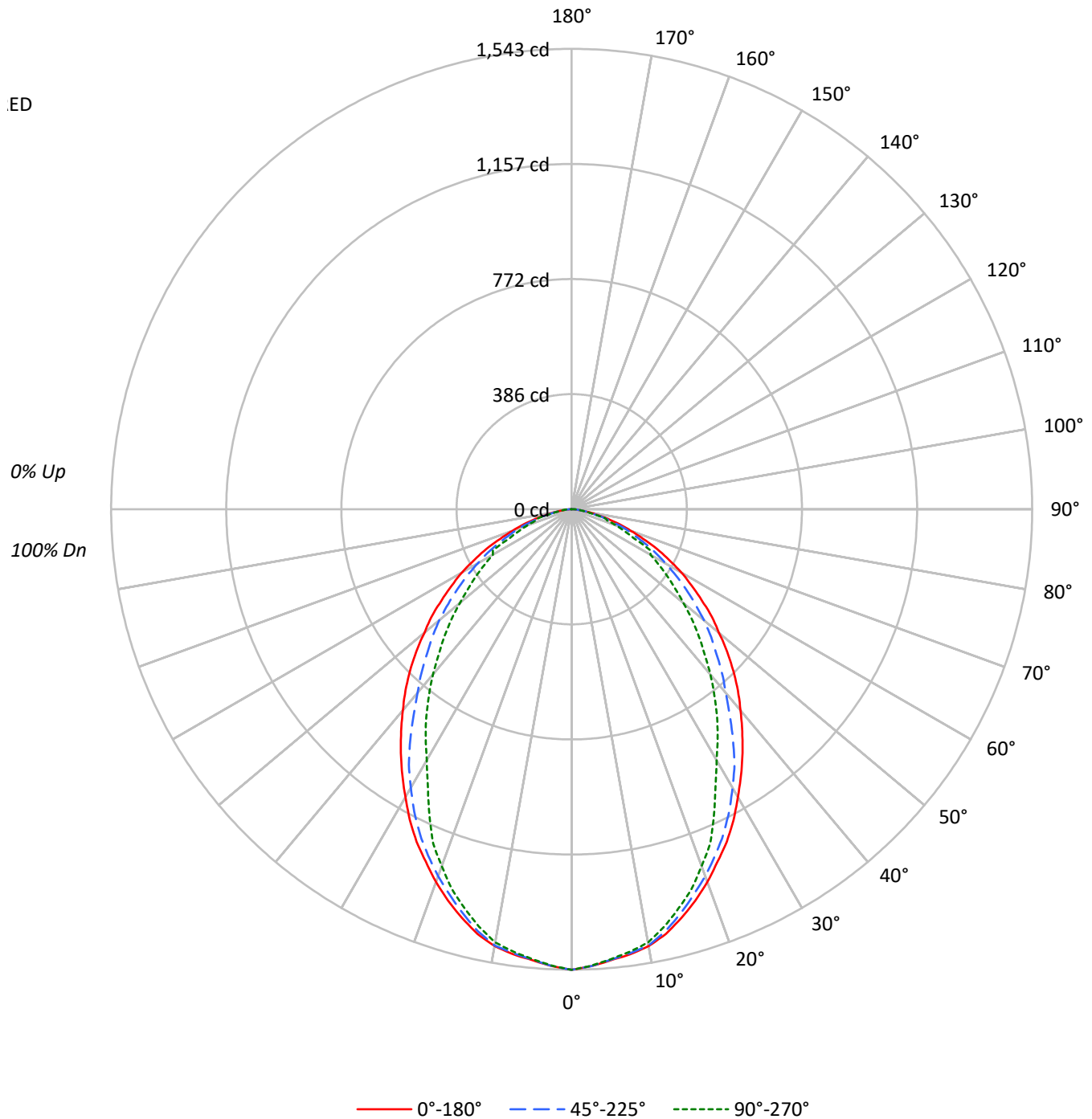
Lumens per Lamp: N/A  
Luminaire Lumens: 3030.0 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8307	8307	8307
5°	8194	8184	8175
10°	8123	8113	8055
15°	7904	7824	7715
20°	7613	7491	7286
25°	7301	7141	6697
30°	6919	6697	6032
35°	6553	6190	5580
40°	6180	5641	5077
45°	5826	5215	4590
50°	5393	4840	4093
55°	4989	4387	3667
60°	4571	3918	3284
65°	4022	3431	2909
70°	3314	3004	2471
75°	2635	2300	2412
80°	1770	1658	1550
85°	1099	1321	1544

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5826 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.7	4.7
10°-20°	394.3	13.0
20°-30°	545.9	18.0
30°-40°	582.1	19.2
40°-50°	531.0	17.5
50°-60°	416.0	13.7
60°-70°	271.1	8.9
70°-80°	120.1	4.0
80°-90°	25.8	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°	1083.9	35.8
0°-40°	1665.9	55.0
0°-60°	2613.0	86.2
0°-90°	3030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3030.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1543	1543	1543	1543	1543	
5°	1517	1515	1515	1513	1513	144
15°	1418	1418	1404	1390	1385	399
25°	1229	1222	1203	1160	1128	564
35°	997	990	942	871	849	624
45°	766	749	685	628	603	590
55°	532	516	468	412	391	477
65°	316	298	269	275	228	311
75°	127	118	111	105	116	136
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1543.4	1543.4	1543.4	1543.4	1543.4
2.5°	1532.7	1532.7	1532.7	1531.0	1531.0
5°	1516.7	1514.9	1514.9	1513.1	1513.1
7.5°	1504.2	1502.4	1500.6	1498.8	1495.3
10°	1486.3	1486.3	1484.6	1475.6	1473.9
12.5°	1457.8	1456.0	1448.9	1436.4	1432.8
15°	1418.5	1418.5	1404.3	1390.0	1384.6
17.5°	1375.7	1373.9	1356.1	1341.8	1334.7
20°	1329.3	1325.8	1307.9	1284.7	1272.2
22.5°	1277.6	1277.6	1256.2	1225.8	1213.3
25°	1229.4	1222.3	1202.6	1159.8	1127.7
27.5°	1174.1	1163.4	1142.0	1081.3	1043.8
30°	1113.4	1108.1	1077.7	999.2	970.7
32.5°	1056.3	1047.4	1015.3	933.2	910.0
35°	997.4	990.3	942.1	870.8	849.3
37.5°	938.6	929.6	869.0	811.9	785.1
40°	879.7	869.0	802.9	751.2	722.7
42.5°	824.4	810.1	745.8	690.5	658.4
45°	765.5	749.4	685.2	628.1	603.1
47.5°	706.6	692.3	633.4	574.6	546.0
50°	644.1	631.7	578.1	519.2	488.9
52.5°	592.4	572.8	521.0	462.1	437.2
55°	531.7	515.7	467.5	412.2	390.8
57.5°	476.4	460.4	415.7	364.0	346.2
60°	424.7	401.5	364.0	319.4	305.1
62.5°	367.6	349.7	317.6	280.1	298.0
65°	315.8	298.0	269.4	274.8	228.4
67.5°	258.7	249.8	224.8	199.8	192.7
70°	210.6	199.8	190.9	164.2	157.0
72.5°	167.7	157.0	144.5	130.3	124.9
75°	126.7	117.8	110.6	105.3	116.0
77.5°	87.4	83.9	78.5	73.2	71.4
80°	57.1	55.3	53.5	51.7	50.0
82.5°	33.9	33.9	33.9	33.9	33.9
85°	17.8	19.6	21.4	23.2	25.0
87.5°	10.7	10.7	12.5	14.3	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)