

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: P560715

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-81-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560715  
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-81-94-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

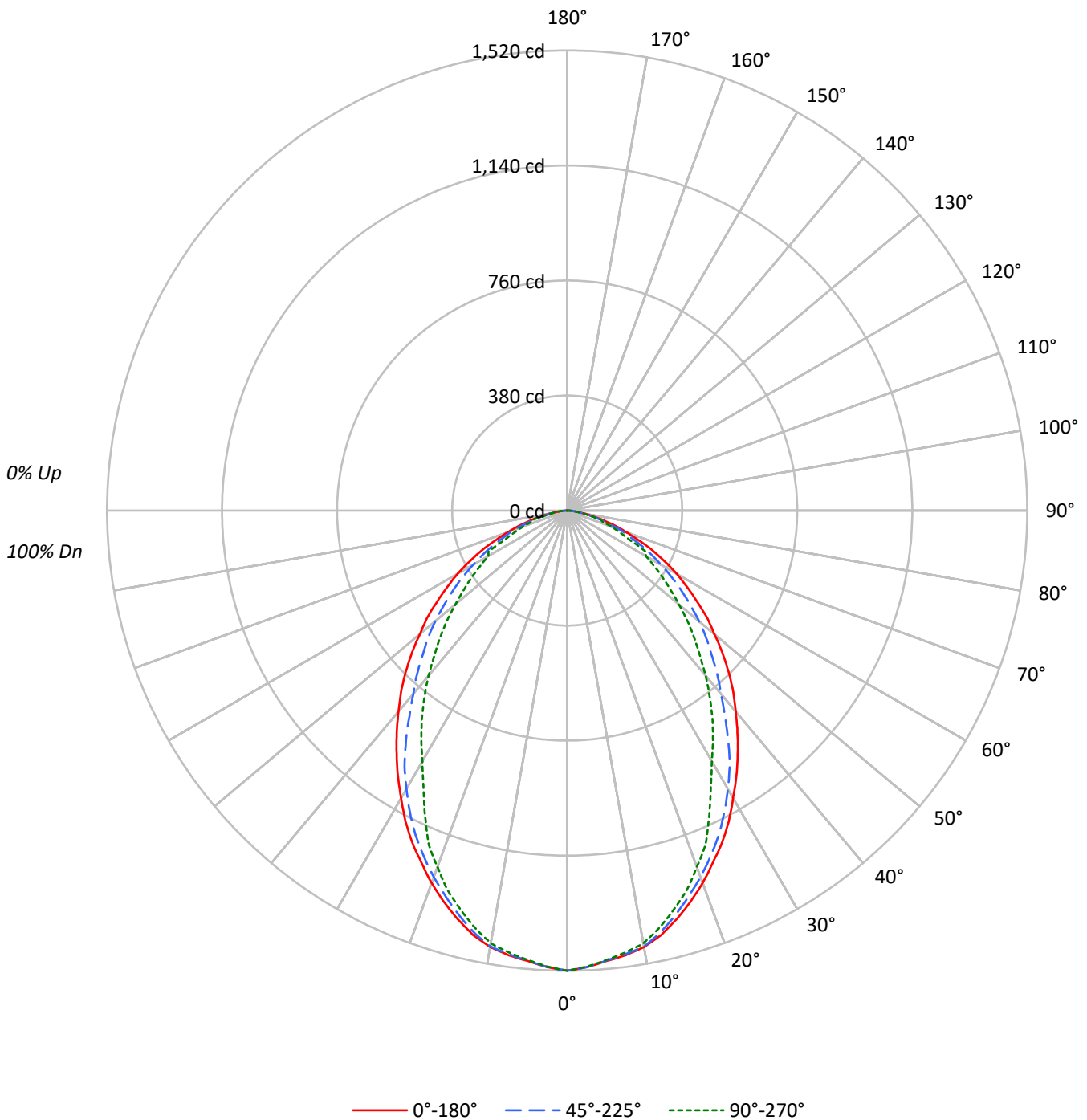
Lumens per Lamp: N/A  
Luminaire Lumens: 2984.0 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8181	8181	8181
5°	8070	8060	8050
10°	8000	7990	7932
15°	7784	7705	7598
20°	7498	7377	7176
25°	7190	7033	6595
30°	6814	6596	5940
35°	6454	6096	5495
40°	6086	5556	5000
45°	5738	5136	4520
50°	5312	4767	4032
55°	4914	4320	3611
60°	4501	3859	3235
65°	3961	3379	2864
70°	3264	2958	2433
75°	2595	2264	2375
80°	1742	1633	1525
85°	1087	1303	1519

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5738 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.5	4.7
10°-20°	388.3	13.0
20°-30°	537.6	18.0
30°-40°	573.2	19.2
40°-50°	523.0	17.5
50°-60°	409.7	13.7
60°-70°	267.0	8.9
70°-80°	118.3	4.0
80°-90°	25.4	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°	1067.4	35.8
0°-40°	1640.6	55.0
0°-60°	2573.3	86.2
0°-90°	2984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2984.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1520	1520	1520	1520	1520	
5°	1494	1492	1492	1490	1490	142
15°	1397	1397	1383	1369	1364	393
25°	1211	1204	1184	1142	1111	556
35°	982	975	928	858	836	614
45°	754	738	675	618	594	581
55°	524	508	460	406	385	470
65°	311	294	265	271	225	307
75°	125	116	109	104	114	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1520.0	1520.0	1520.0	1520.0	1520.0
2.5°	1509.5	1509.5	1509.5	1507.7	1507.7
5°	1493.7	1491.9	1491.9	1490.1	1490.1
7.5°	1481.4	1479.6	1477.8	1476.1	1472.6
10°	1463.8	1463.8	1462.0	1453.2	1451.5
12.5°	1435.7	1433.9	1426.9	1414.6	1411.1
15°	1397.0	1397.0	1382.9	1368.9	1363.6
17.5°	1354.8	1353.1	1335.5	1321.4	1314.4
20°	1309.1	1305.6	1288.1	1265.2	1252.9
22.5°	1258.2	1258.2	1237.1	1207.2	1194.9
25°	1210.7	1203.7	1184.4	1142.2	1110.6
27.5°	1156.3	1145.7	1124.6	1064.9	1028.0
30°	1096.5	1091.2	1061.4	984.1	955.9
32.5°	1040.3	1031.5	999.9	919.0	896.2
35°	982.3	975.3	927.8	857.5	836.4
37.5°	924.3	915.5	855.8	799.5	773.2
40°	866.3	855.8	790.8	739.8	711.7
42.5°	811.8	797.8	734.5	680.1	648.4
45°	753.9	738.0	674.8	618.5	593.9
47.5°	695.9	681.8	623.8	565.8	537.7
50°	634.4	622.1	569.3	511.4	481.5
52.5°	583.4	564.1	513.1	455.1	430.5
55°	523.7	507.8	460.4	405.9	384.8
57.5°	469.2	453.4	409.4	358.5	340.9
60°	418.2	395.4	358.5	314.5	300.5
62.5°	362.0	344.4	312.8	275.9	293.5
65°	311.0	293.5	265.3	270.6	224.9
67.5°	254.8	246.0	221.4	196.8	189.8
70°	207.4	196.8	188.0	161.7	154.6
72.5°	165.2	154.6	142.3	128.3	123.0
75°	124.8	116.0	108.9	103.7	114.2
77.5°	86.1	82.6	77.3	72.0	70.3
80°	56.2	54.5	52.7	51.0	49.2
82.5°	33.4	33.4	33.4	33.4	33.4
85°	17.6	19.3	21.1	22.8	24.6
87.5°	10.5	10.5	12.3	14.1	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)