

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: P560367

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-93-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560367  
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-LD4-2HI-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

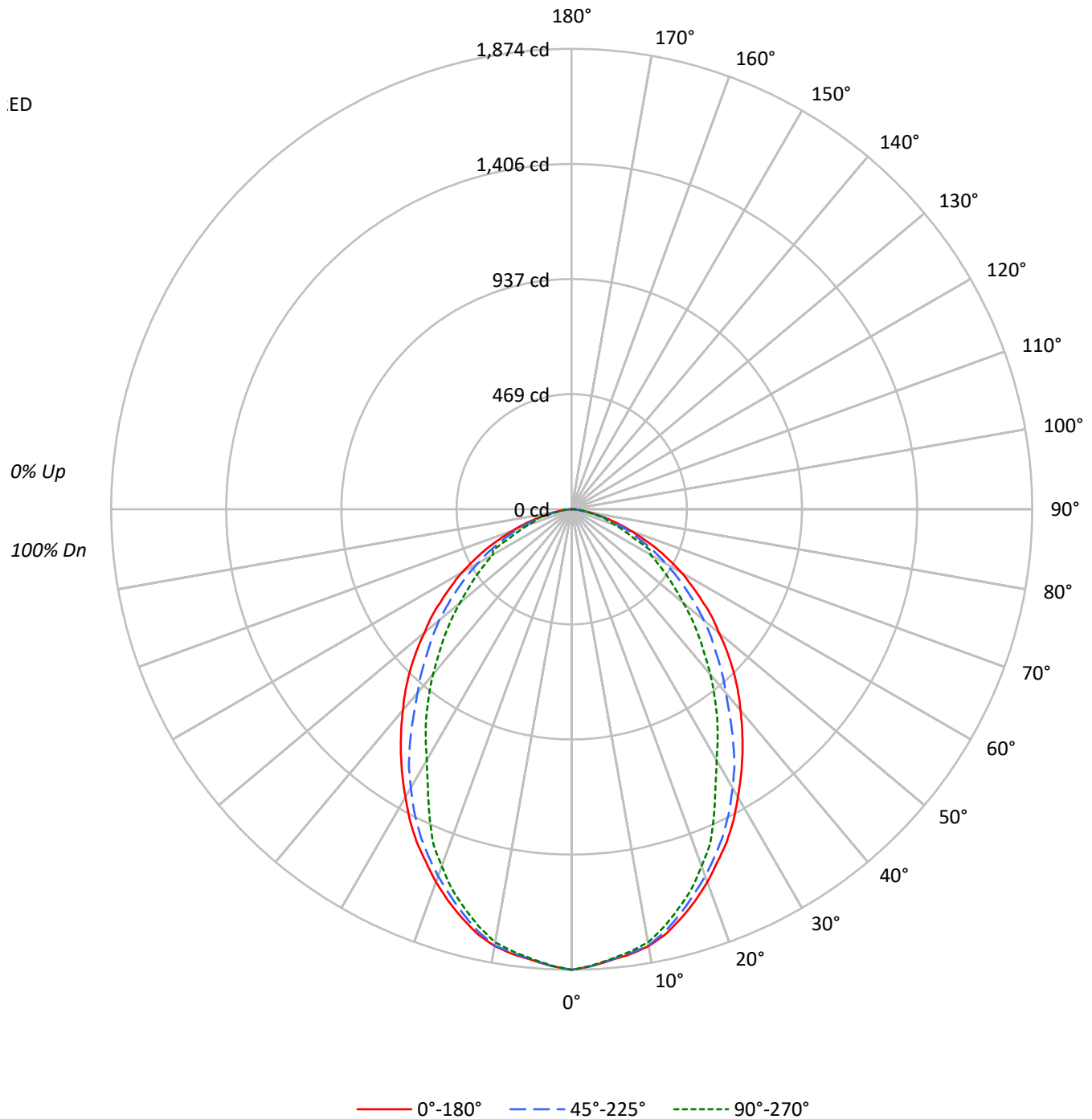
Lumens per Lamp: N/A  
Luminaire Lumens: 3680.0 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	10088	10088	10088
5°	9951	9940	9928
10°	9865	9853	9782
15°	9599	9503	9370
20°	9247	9098	8849
25°	8867	8674	8133
30°	8404	8134	7326
35°	7959	7518	6777
40°	7506	6851	6166
45°	7076	6334	5575
50°	6550	5879	4972
55°	6060	5328	4453
60°	5552	4759	3989
65°	4885	4167	3533
70°	4024	3649	3001
75°	3200	2795	2930
80°	2148	2015	1881
85°	1340	1606	1871

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7076 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.5	4.7
10°-20°	478.9	13.0
20°-30°	663.0	18.0
30°-40°	706.9	19.2
40°-50°	644.9	17.5
50°-60°	505.2	13.7
60°-70°	329.3	8.9
70°-80°	145.9	4.0
80°-90°	31.3	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°	1316.4	35.8
0°-40°	2023.3	55.0
0°-60°	3173.5	86.2
0°-90°	3680.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3680.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1874	1874	1874	1874	1874	
5°	1842	1840	1840	1838	1838	175
15°	1723	1723	1706	1688	1682	484
25°	1493	1484	1461	1409	1370	685
35°	1211	1203	1144	1058	1032	757
45°	930	910	832	763	732	716
55°	646	626	568	501	475	579
65°	384	362	327	334	277	378
75°	154	143	134	128	141	165
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1874.5	1874.5	1874.5	1874.5	1874.5
2.5°	1861.5	1861.5	1861.5	1859.4	1859.4
5°	1842.0	1839.9	1839.9	1837.7	1837.7
7.5°	1826.9	1824.7	1822.5	1820.4	1816.0
10°	1805.2	1805.2	1803.0	1792.2	1790.0
12.5°	1770.5	1768.4	1759.7	1744.5	1740.2
15°	1722.8	1722.8	1705.5	1688.2	1681.7
17.5°	1670.8	1668.7	1647.0	1629.7	1621.0
20°	1614.5	1610.2	1588.5	1560.3	1545.1
22.5°	1551.6	1551.6	1525.6	1488.8	1473.6
25°	1493.1	1484.5	1460.6	1408.6	1369.6
27.5°	1426.0	1413.0	1386.9	1313.3	1267.8
30°	1352.3	1345.8	1308.9	1213.6	1178.9
32.5°	1282.9	1272.1	1233.1	1133.4	1105.2
35°	1211.4	1202.7	1144.2	1057.5	1031.5
37.5°	1139.9	1129.1	1055.4	986.0	953.5
40°	1068.4	1055.4	975.2	912.3	877.7
42.5°	1001.2	983.9	905.8	838.7	799.7
45°	929.7	910.2	832.2	762.8	732.5
47.5°	858.2	840.8	769.3	697.8	663.1
50°	782.3	767.2	702.1	630.6	593.8
52.5°	719.5	695.6	632.8	561.3	530.9
55°	645.8	626.3	567.8	500.6	474.6
57.5°	578.6	559.1	504.9	442.1	420.4
60°	515.8	487.6	442.1	387.9	370.6
62.5°	446.4	424.8	385.7	340.2	361.9
65°	383.6	361.9	327.2	333.7	277.4
67.5°	314.2	303.4	273.1	242.7	234.0
70°	255.7	242.7	231.9	199.4	190.7
72.5°	203.7	190.7	175.5	158.2	151.7
75°	153.9	143.0	134.4	127.9	140.9
77.5°	106.2	101.9	95.4	88.9	86.7
80°	69.3	67.2	65.0	62.8	60.7
82.5°	41.2	41.2	41.2	41.2	41.2
85°	21.7	23.8	26.0	28.2	30.3
87.5°	13.0	13.0	15.2	17.3	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)