

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: P560301

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560301  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

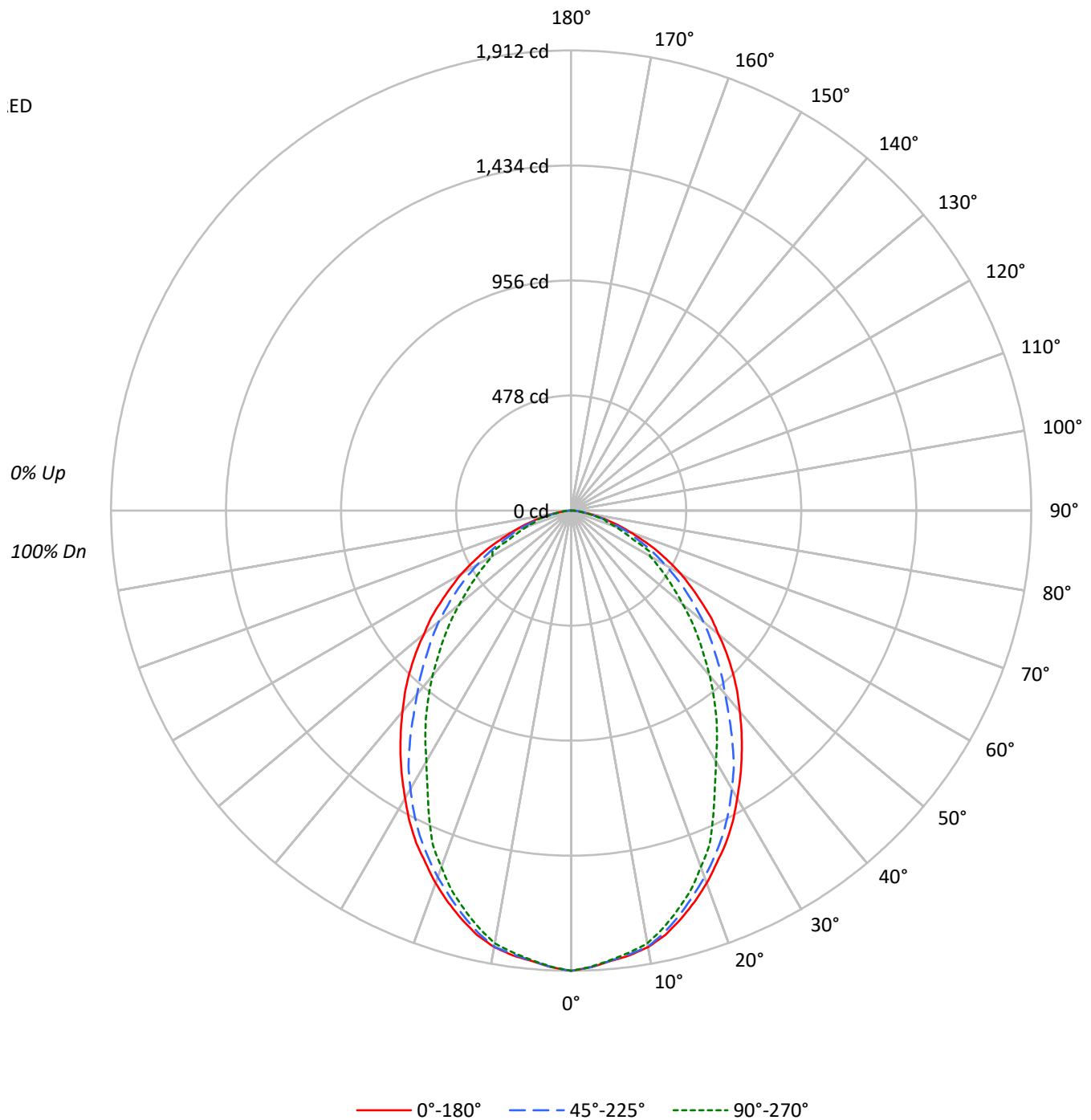
Lumens per Lamp: N/A  
Luminaire Lumens: 3754.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																		
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°	10291	10291	10291
5°	10152	10140	10128
10°	10064	10052	9979
15°	9792	9694	9558
20°	9433	9281	9027
25°	9045	8848	8296
30°	8573	8298	7474
35°	8119	7669	6914
40°	7657	6989	6290
45°	7218	6461	5687
50°	6682	5997	5071
55°	6182	5435	4542
60°	5663	4855	4069
65°	4983	4251	3604
70°	4105	3722	3061
75°	3265	2851	2988
80°	2191	2055	1918
85°	1365	1636	1908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7218 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.0	4.7
10°-20°	488.5	13.0
20°-30°	676.3	18.0
30°-40°	721.2	19.2
40°-50°	657.9	17.5
50°-60°	515.4	13.7
60°-70°	335.9	8.9
70°-80°	148.8	4.0
80°-90°	31.9	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°	1342.8	35.8
0°-40°	2064.0	55.0
0°-60°	3237.3	86.2
0°-90°	3754.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3754.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1912	1912	1912	1912	1912	
5°	1879	1877	1877	1875	1875	178
15°	1758	1758	1740	1722	1716	494
25°	1523	1514	1490	1437	1397	699
35°	1236	1227	1167	1079	1052	773
45°	948	928	849	778	747	731
55°	659	639	579	511	484	591
65°	391	369	334	340	283	386
75°	157	146	137	130	144	168
85°	22	24	26	29	31	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1912.2	1912.2	1912.2	1912.2	1912.2
2.5°	1899.0	1899.0	1899.0	1896.8	1896.8
5°	1879.1	1876.9	1876.9	1874.7	1874.7
7.5°	1863.6	1861.4	1859.2	1857.0	1852.5
10°	1841.5	1841.5	1839.3	1828.2	1826.0
12.5°	1806.1	1803.9	1795.1	1779.6	1775.2
15°	1757.5	1757.5	1739.8	1722.1	1715.5
17.5°	1704.4	1702.2	1680.1	1662.4	1653.6
20°	1647.0	1642.5	1620.4	1591.7	1576.2
22.5°	1582.8	1582.8	1556.3	1518.7	1503.3
25°	1523.2	1514.3	1490.0	1436.9	1397.1
27.5°	1454.6	1441.4	1414.8	1339.7	1293.2
30°	1379.5	1372.8	1335.3	1238.0	1202.6
32.5°	1308.7	1297.7	1257.9	1156.2	1127.4
35°	1235.8	1226.9	1167.2	1078.8	1052.3
37.5°	1162.8	1151.8	1076.6	1005.9	972.7
40°	1089.9	1076.6	994.8	930.7	895.3
42.5°	1021.3	1003.6	924.1	855.5	815.7
45°	948.4	928.5	848.9	778.2	747.2
47.5°	875.4	857.7	784.8	711.8	676.5
50°	798.1	782.6	716.3	643.3	605.7
52.5°	733.9	709.6	645.5	572.6	541.6
55°	658.8	638.9	579.2	510.7	484.1
57.5°	590.3	570.4	515.1	451.0	428.9
60°	526.1	497.4	451.0	395.7	378.0
62.5°	455.4	433.3	393.5	347.1	369.2
65°	391.3	369.2	333.8	340.4	283.0
67.5°	320.5	309.5	278.5	247.6	238.8
70°	260.9	247.6	236.5	203.4	194.5
72.5°	207.8	194.5	179.1	161.4	154.7
75°	157.0	145.9	137.1	130.4	143.7
77.5°	108.3	103.9	97.3	90.6	88.4
80°	70.7	68.5	66.3	64.1	61.9
82.5°	42.0	42.0	42.0	42.0	42.0
85°	22.1	24.3	26.5	28.7	30.9
87.5°	13.3	13.3	15.5	17.7	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)