

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: P560191

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-80-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560191  
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-35-UNV-80-97-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

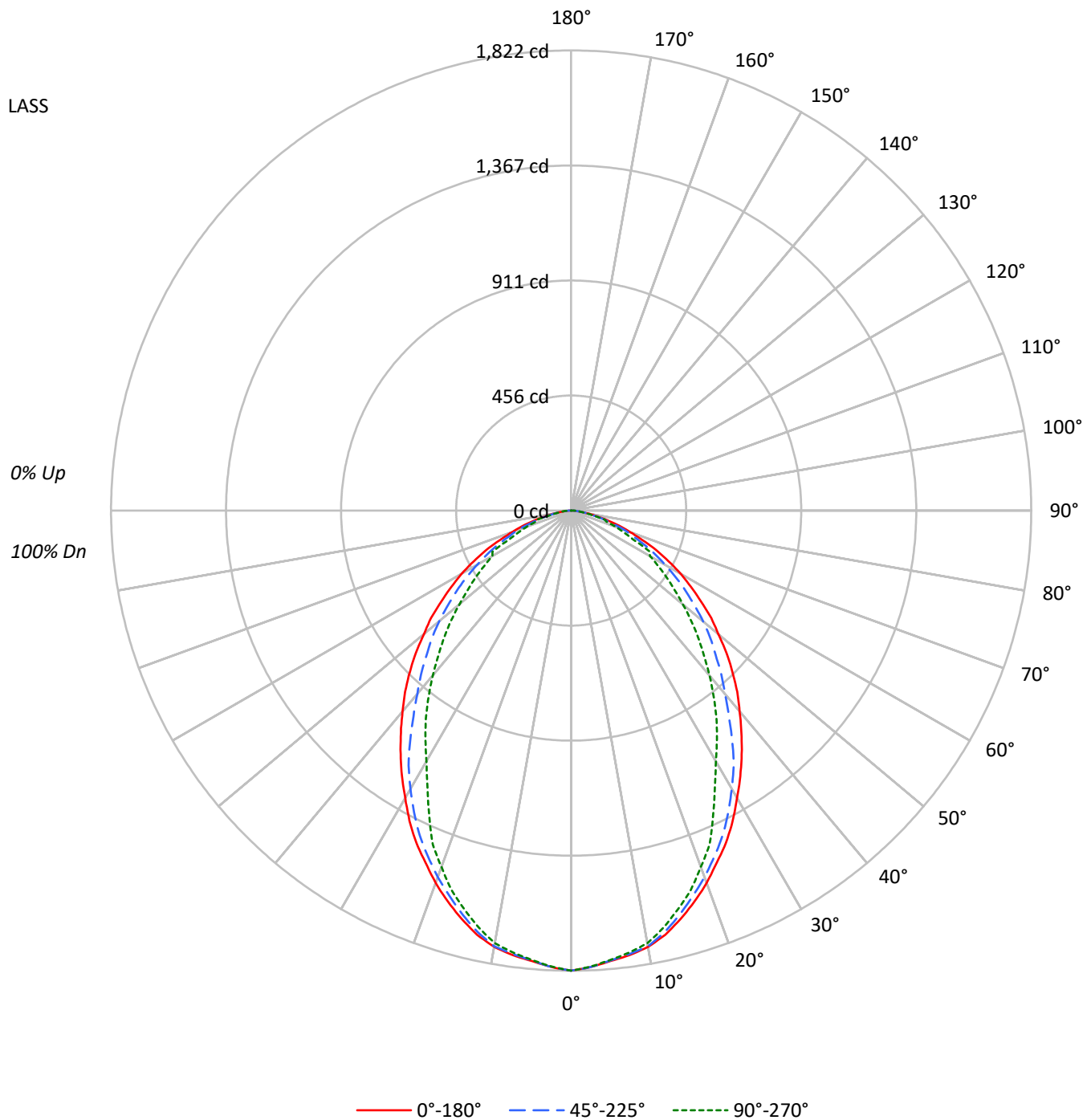
Lumens per Lamp: N/A  
Luminaire Lumens: 3576.0 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9804	9804	9804
5°	9671	9659	9648
10°	9587	9575	9506
15°	9328	9234	9105
20°	8986	8841	8600
25°	8616	8428	7903
30°	8167	7904	7119
35°	7734	7305	6586
40°	7294	6658	5992
45°	6876	6154	5418
50°	6365	5713	4831
55°	5888	5177	4328
60°	5395	4624	3876
65°	4746	4050	3432
70°	3910	3545	2916
75°	3109	2716	2847
80°	2089	1959	1829
85°	1303	1562	1822

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6876 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.6	4.7
10°-20°	465.4	13.0
20°-30°	644.2	18.0
30°-40°	687.0	19.2
40°-50°	626.7	17.5
50°-60°	491.0	13.7
60°-70°	320.0	8.9
70°-80°	141.8	4.0
80°-90°	30.4	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°	1279.2	35.8
0°-40°	1966.1	55.0
0°-60°	3083.8	86.2
0°-90°	3576.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3576.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1822	1822	1822	1822	1822	
5°	1790	1788	1788	1786	1786	170
15°	1674	1674	1657	1640	1634	471
25°	1451	1442	1419	1369	1331	666
35°	1177	1169	1112	1028	1002	736
45°	903	884	809	741	712	696
55°	628	609	552	486	461	563
65°	373	352	318	324	270	367
75°	150	139	131	124	137	160
85°	21	23	25	27	30	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1821.6	1821.6	1821.6	1821.6	1821.6
2.5°	1808.9	1808.9	1808.9	1806.8	1806.8
5°	1790.0	1787.9	1787.9	1785.8	1785.8
7.5°	1775.2	1773.1	1771.0	1768.9	1764.7
10°	1754.2	1754.2	1752.1	1741.5	1739.4
12.5°	1720.5	1718.4	1710.0	1695.2	1691.0
15°	1674.2	1674.2	1657.3	1640.5	1634.1
17.5°	1623.6	1621.5	1600.5	1583.6	1575.2
20°	1568.9	1564.7	1543.6	1516.2	1501.5
22.5°	1507.8	1507.8	1482.5	1446.7	1432.0
25°	1450.9	1442.5	1419.3	1368.8	1330.9
27.5°	1385.7	1373.0	1347.7	1276.1	1231.9
30°	1314.1	1307.7	1271.9	1179.3	1145.6
32.5°	1246.7	1236.1	1198.2	1101.4	1074.0
35°	1177.2	1168.8	1111.9	1027.7	1002.4
37.5°	1107.7	1097.2	1025.6	958.2	926.6
40°	1038.2	1025.6	947.6	886.6	852.9
42.5°	972.9	956.1	880.2	815.0	777.1
45°	903.4	884.5	808.6	741.3	711.8
47.5°	833.9	817.1	747.6	678.1	644.4
50°	760.2	745.5	682.3	612.8	577.0
52.5°	699.1	676.0	614.9	545.4	515.9
55°	627.5	608.6	551.7	486.5	461.2
57.5°	562.3	543.3	490.7	429.6	408.5
60°	501.2	473.8	429.6	376.9	360.1
62.5°	433.8	412.7	374.8	330.6	351.7
65°	372.7	351.7	318.0	324.3	269.5
67.5°	305.3	294.8	265.3	235.9	227.4
70°	248.5	235.9	225.3	193.7	185.3
72.5°	198.0	185.3	170.6	153.7	147.4
75°	149.5	139.0	130.6	124.2	136.9
77.5°	103.2	99.0	92.7	86.3	84.2
80°	67.4	65.3	63.2	61.1	59.0
82.5°	40.0	40.0	40.0	40.0	40.0
85°	21.1	23.2	25.3	27.4	29.5
87.5°	12.6	12.6	14.7	16.8	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)