

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: P560181

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-80-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560181  
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-80-86-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

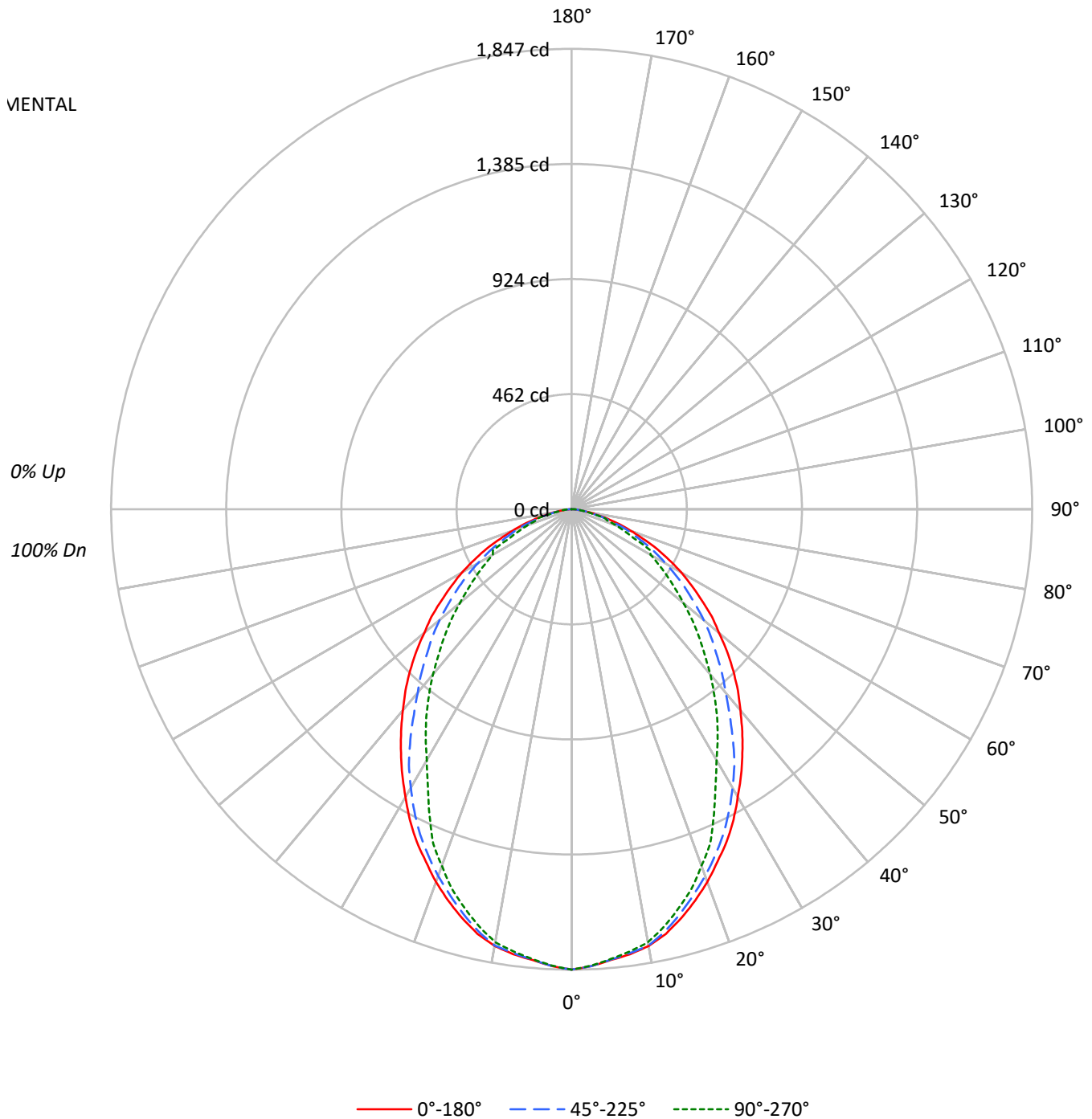
Lumens per Lamp: N/A  
Luminaire Lumens: 3626.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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					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°	9940	9940	9940
5°	9806	9794	9782
10°	9721	9709	9639
15°	9459	9363	9232
20°	9111	8964	8720
25°	8736	8546	8014
30°	8280	8015	7219
35°	7842	7407	6678
40°	7396	6751	6076
45°	6972	6241	5493
50°	6454	5792	4899
55°	5971	5249	4388
60°	5470	4689	3930
65°	4812	4106	3480
70°	3965	3596	2957
75°	3152	2753	2886
80°	2117	1987	1853
85°	1321	1581	1846

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6972 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.9	4.7
10°-20°	471.9	13.0
20°-30°	653.3	18.0
30°-40°	696.6	19.2
40°-50°	635.5	17.5
50°-60°	497.8	13.7
60°-70°	324.5	8.9
70°-80°	143.8	4.0
80°-90°	30.9	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°	1297.1	35.8
0°-40°	1993.6	55.0
0°-60°	3126.9	86.2
0°-90°	3626.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3626.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1847	1847	1847	1847	1847	
5°	1815	1813	1813	1811	1811	172
15°	1698	1698	1680	1663	1657	477
25°	1471	1463	1439	1388	1350	675
35°	1194	1185	1127	1042	1016	746
45°	916	897	820	752	722	706
55°	636	617	559	493	468	571
65°	378	357	322	329	273	372
75°	152	141	132	126	139	162
85°	21	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°	1847.0	1847.0	1847.0	1847.0	1847.0
2.5°	1834.2	1834.2	1834.2	1832.1	1832.1
5°	1815.0	1812.9	1812.9	1810.7	1810.7
7.5°	1800.1	1797.9	1795.8	1793.7	1789.4
10°	1778.7	1778.7	1776.6	1765.9	1763.8
12.5°	1744.5	1742.4	1733.9	1718.9	1714.6
15°	1697.6	1697.6	1680.5	1663.4	1657.0
17.5°	1646.3	1644.2	1622.8	1605.7	1597.2
20°	1590.8	1586.5	1565.2	1537.4	1522.5
22.5°	1528.9	1528.9	1503.3	1467.0	1452.0
25°	1471.2	1462.7	1439.2	1387.9	1349.5
27.5°	1405.0	1392.2	1366.6	1294.0	1249.2
30°	1332.4	1326.0	1289.7	1195.8	1161.6
32.5°	1264.1	1253.4	1215.0	1116.8	1089.0
35°	1193.6	1185.1	1127.4	1042.0	1016.4
37.5°	1123.2	1112.5	1039.9	971.6	939.5
40°	1052.7	1039.9	960.9	899.0	864.8
42.5°	986.5	969.4	892.6	826.4	787.9
45°	916.0	896.8	820.0	751.6	721.7
47.5°	845.6	828.5	758.0	687.6	653.4
50°	770.8	755.9	691.8	621.4	585.1
52.5°	708.9	685.4	623.5	553.0	523.1
55°	636.3	617.1	559.4	493.3	467.6
57.5°	570.1	550.9	497.5	435.6	414.2
60°	508.2	480.4	435.6	382.2	365.1
62.5°	439.9	418.5	380.1	335.2	356.6
65°	377.9	356.6	322.4	328.8	273.3
67.5°	309.6	298.9	269.0	239.2	230.6
70°	252.0	239.2	228.5	196.4	187.9
72.5°	200.7	187.9	173.0	155.9	149.5
75°	151.6	140.9	132.4	126.0	138.8
77.5°	104.6	100.4	94.0	87.5	85.4
80°	68.3	66.2	64.1	61.9	59.8
82.5°	40.6	40.6	40.6	40.6	40.6
85°	21.4	23.5	25.6	27.8	29.9
87.5°	12.8	12.8	14.9	17.1	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)