

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: P560243

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-80-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560243  
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-80-85-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

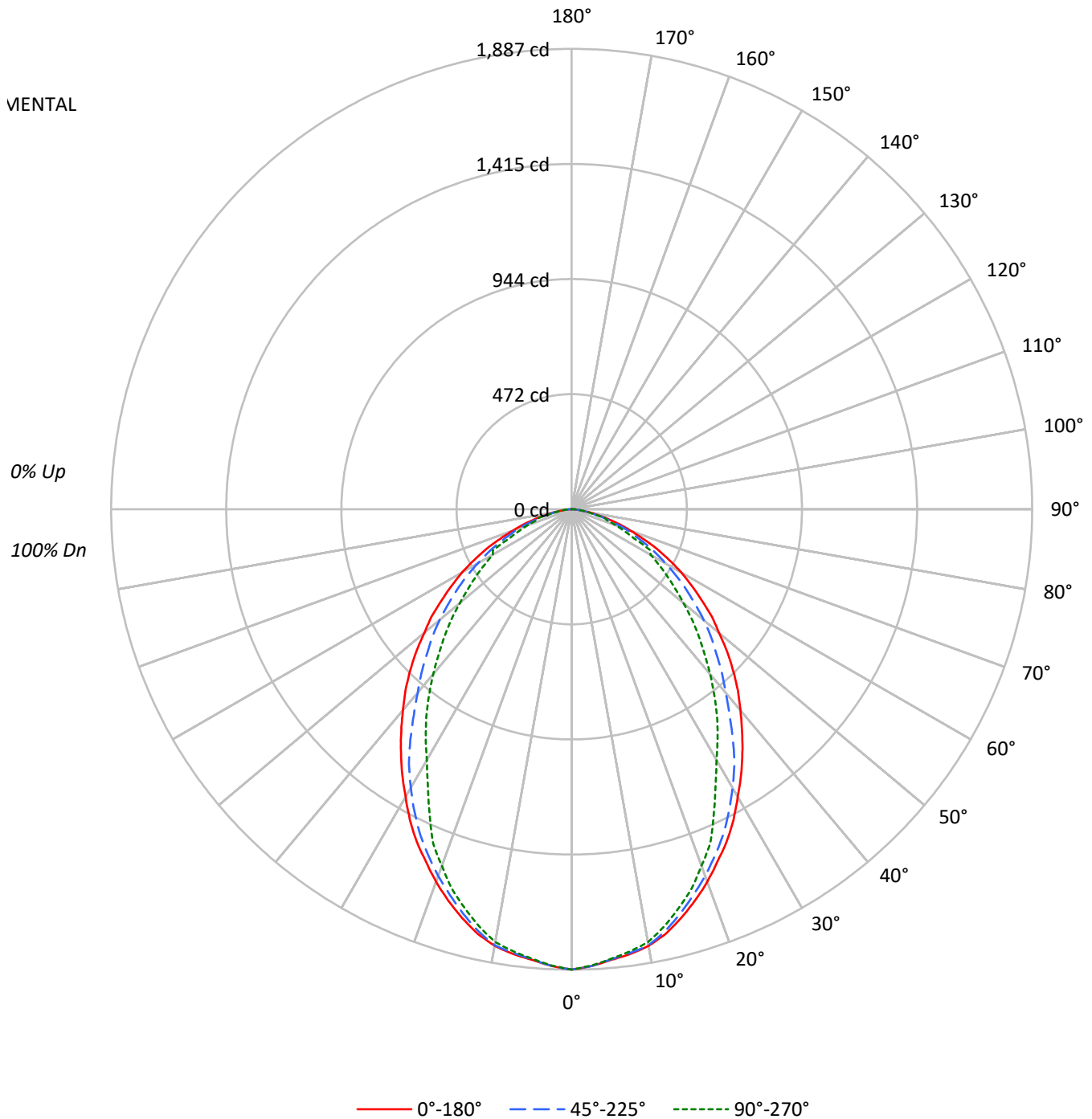
Lumens per Lamp: N/A  
Luminaire Lumens: 3704.0 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	10155	10155	10155
5°	10016	10005	9993
10°	9930	9918	9846
15°	9662	9565	9431
20°	9307	9157	8907
25°	8925	8731	8186
30°	8459	8188	7374
35°	8011	7567	6822
40°	7555	6896	6206
45°	7122	6375	5612
50°	6593	5917	5004
55°	6099	5362	4482
60°	5588	4790	4015
65°	4917	4195	3556
70°	4050	3673	3020
75°	3221	2811	2949
80°	2163	2027	1894
85°	1346	1618	1883

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7122 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.6	4.7
10°-20°	482.0	13.0
20°-30°	667.3	18.0
30°-40°	711.5	19.2
40°-50°	649.1	17.5
50°-60°	508.6	13.7
60°-70°	331.5	8.9
70°-80°	146.8	4.0
80°-90°	31.5	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°	1325.0	35.8
0°-40°	2036.5	55.0
0°-60°	3194.2	86.2
0°-90°	3704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3704.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1887	1887	1887	1887	1887	
5°	1854	1852	1852	1850	1850	176
15°	1734	1734	1717	1699	1693	487
25°	1503	1494	1470	1418	1378	690
35°	1219	1211	1152	1064	1038	762
45°	936	916	838	768	737	721
55°	650	630	572	504	478	583
65°	386	364	329	336	279	380
75°	155	144	135	129	142	166
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°	1886.8	1886.8	1886.8	1886.8	1886.8
2.5°	1873.7	1873.7	1873.7	1871.5	1871.5
5°	1854.0	1851.9	1851.9	1849.7	1849.7
7.5°	1838.8	1836.6	1834.4	1832.2	1827.9
10°	1817.0	1817.0	1814.8	1803.9	1801.7
12.5°	1782.1	1779.9	1771.2	1755.9	1751.5
15°	1734.1	1734.1	1716.6	1699.2	1692.6
17.5°	1681.7	1679.6	1657.7	1640.3	1631.6
20°	1625.0	1620.7	1598.8	1570.5	1555.2
22.5°	1561.8	1561.8	1535.6	1498.5	1483.2
25°	1502.9	1494.1	1470.2	1417.8	1378.5
27.5°	1435.3	1422.2	1396.0	1321.8	1276.0
30°	1361.1	1354.5	1317.5	1221.5	1186.6
32.5°	1291.3	1280.4	1241.1	1140.8	1112.4
35°	1219.3	1210.6	1151.7	1064.4	1038.3
37.5°	1147.3	1136.4	1062.3	992.5	959.7
40°	1075.3	1062.3	981.6	918.3	883.4
42.5°	1007.7	990.3	911.8	844.1	804.9
45°	935.7	916.1	837.6	767.8	737.3
47.5°	863.8	846.3	774.3	702.4	667.5
50°	787.4	772.2	706.7	634.7	597.7
52.5°	724.2	700.2	636.9	564.9	534.4
55°	650.0	630.4	571.5	503.9	477.7
57.5°	582.4	562.8	508.2	445.0	423.2
60°	519.1	490.8	445.0	390.4	373.0
62.5°	449.3	427.5	388.3	342.5	364.3
65°	386.1	364.3	329.4	335.9	279.2
67.5°	316.3	305.4	274.8	244.3	235.6
70°	257.4	244.3	233.4	200.7	191.9
72.5°	205.0	191.9	176.7	159.2	152.7
75°	154.9	144.0	135.2	128.7	141.8
77.5°	106.9	102.5	96.0	89.4	87.2
80°	69.8	67.6	65.4	63.3	61.1
82.5°	41.4	41.4	41.4	41.4	41.4
85°	21.8	24.0	26.2	28.4	30.5
87.5°	13.1	13.1	15.3	17.4	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)