

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: P590150

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590150
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2HI-35-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4363.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

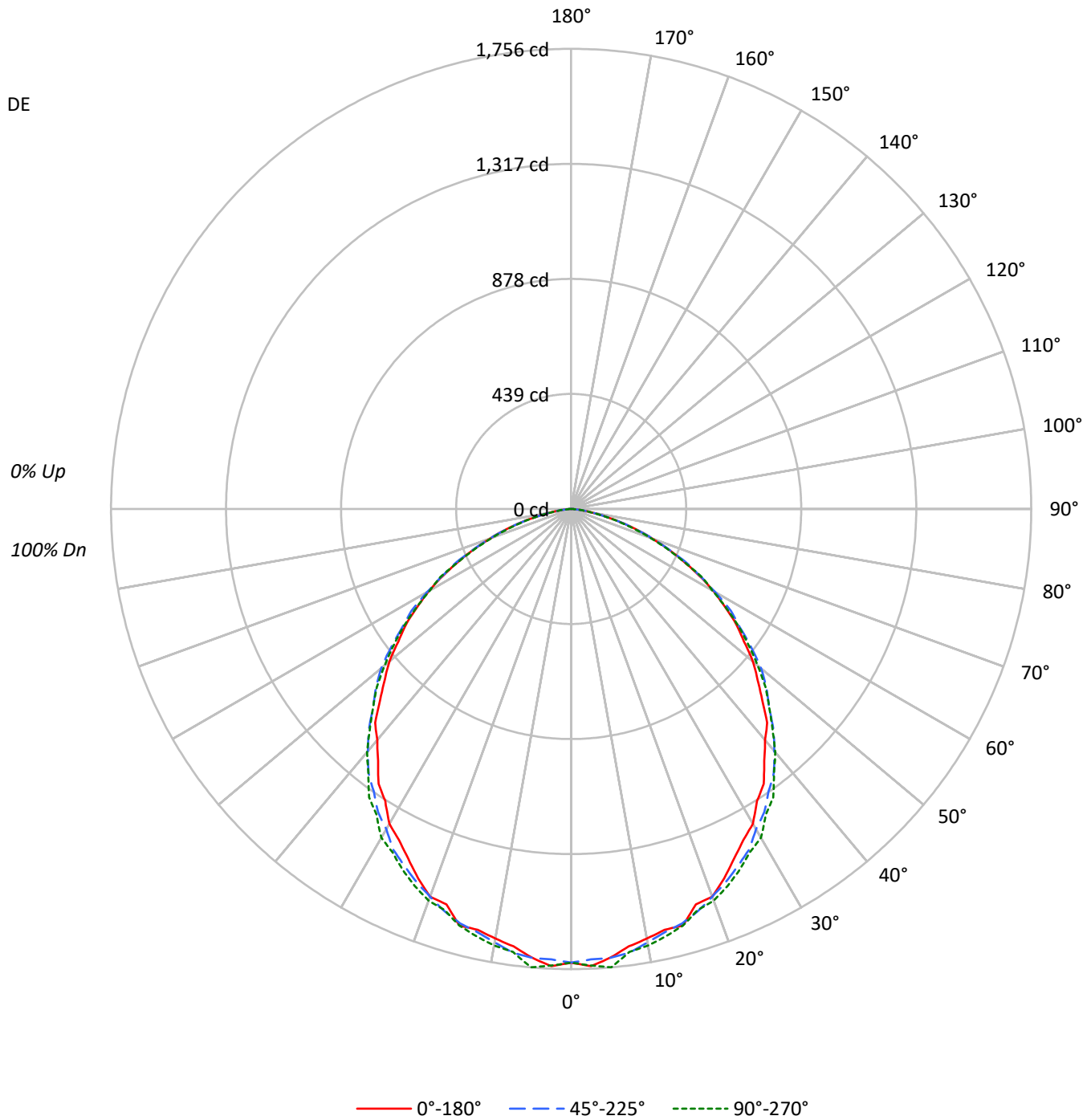
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4658	4658	4658
5°	4643	4645	4743
10°	4549	4589	4621
15°	4585	4560	4586
20°	4507	4507	4556
25°	4369	4464	4513
30°	4309	4385	4501
35°	4207	4318	4414
40°	4044	4238	4257
45°	3921	4061	4067
50°	3792	3964	3888
55°	3613	3684	3658
60°	3379	3413	3351
65°	3013	3090	2991
70°	2585	2594	2522
75°	2047	2043	1964
80°	1371	1334	1282
85°	744	738	692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4166 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.8	3.7
10°-20°	461.5	10.6
20°-30°	691.4	15.8
30°-40°	819.5	18.8
40°-50°	821.0	18.8
50°-60°	696.9	16.0
60°-70°	469.9	10.8
70°-80°	206.5	4.7
80°-90°	33.5	0.8
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°	1315.8	30.2
0°-40°	2135.3	48.9
0°-60°	3653.1	83.7
0°-90°	4363.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4363.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1731	1731	1731	1731	1731	
5°	1719	1715	1720	1714	1756	162
15°	1646	1627	1637	1645	1646	459
25°	1471	1479	1504	1523	1520	680
35°	1281	1284	1314	1345	1344	795
45°	1030	1050	1067	1095	1069	797
55°	770	765	785	780	780	685
65°	473	467	485	467	470	471
75°	197	193	196	183	189	211
85°	24	24	24	23	22	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1731.1	1731.1	1731.1	1731.1	1731.1
2.5°	1746.1	1732.9	1720.6	1734.9	1743.6
5°	1718.8	1714.8	1719.5	1714.4	1755.7
7.5°	1683.5	1698.9	1707.9	1702.3	1704.8
10°	1664.7	1659.4	1679.3	1693.1	1691.1
12.5°	1644.6	1652.7	1653.8	1668.8	1670.1
15°	1645.7	1626.7	1636.8	1645.3	1646.0
17.5°	1581.8	1602.4	1609.3	1628.8	1604.6
20°	1574.0	1559.0	1574.0	1593.9	1590.8
22.5°	1525.9	1509.2	1541.4	1559.0	1557.9
25°	1471.4	1479.4	1503.6	1523.3	1520.1
27.5°	1423.6	1433.0	1467.4	1494.4	1477.0
30°	1386.7	1382.0	1411.1	1435.2	1448.6
32.5°	1320.8	1337.7	1371.7	1395.6	1382.9
35°	1280.7	1284.5	1314.3	1344.7	1343.8
37.5°	1210.8	1228.4	1270.2	1278.7	1270.9
40°	1151.1	1168.8	1206.5	1215.7	1211.9
42.5°	1107.1	1110.2	1142.6	1153.1	1136.4
45°	1030.4	1049.6	1067.1	1094.6	1068.6
47.5°	965.1	974.1	1011.6	1019.0	1005.4
50°	905.9	909.0	946.8	937.6	928.7
52.5°	831.5	844.7	865.9	864.1	853.6
55°	770.2	765.1	785.2	779.8	779.6
57.5°	696.7	705.6	722.2	713.7	700.1
60°	627.9	628.1	634.1	624.5	622.7
62.5°	551.2	553.9	555.2	543.4	562.6
65°	473.2	466.9	485.3	466.7	469.8
67.5°	401.4	404.6	402.8	391.2	395.6
70°	328.6	332.6	329.7	316.5	320.5
72.5°	262.0	257.0	260.2	243.6	251.2
75°	196.9	192.9	196.5	182.6	188.9
77.5°	134.1	137.2	135.0	127.6	131.9
80°	88.5	86.1	86.1	81.8	82.7
82.5°	51.6	49.2	48.5	47.2	49.2
85°	24.1	23.5	23.9	23.2	22.4
87.5°	8.7	8.9	8.9	8.5	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)