

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: P590207

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590207
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-50-UNV-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4526.0 lumens
Efficiency: N/A
Efficacy: 104.8 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

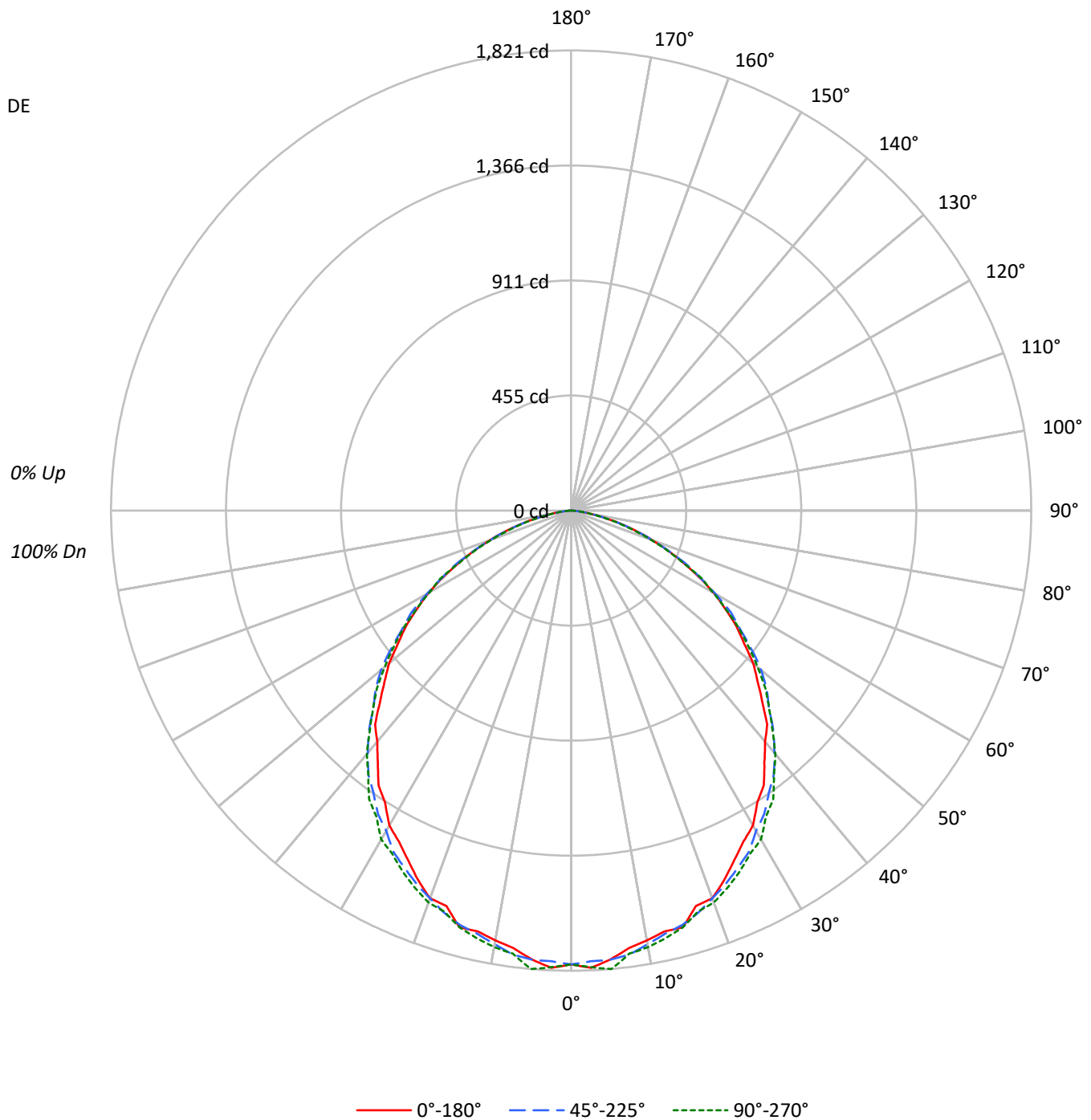
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4832	4832	4832
5°	4816	4818	4920
10°	4719	4760	4794
15°	4756	4730	4757
20°	4676	4676	4726
25°	4532	4631	4682
30°	4470	4548	4669
35°	4365	4479	4579
40°	4195	4397	4416
45°	4068	4212	4219
50°	3934	4112	4033
55°	3749	3821	3794
60°	3505	3540	3477
65°	3126	3205	3103
70°	2681	2691	2616
75°	2124	2119	2037
80°	1423	1384	1330
85°	772	766	716

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4321 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.9	3.7
10°-20°	478.7	10.6
20°-30°	717.3	15.8
30°-40°	850.1	18.8
40°-50°	851.7	18.8
50°-60°	722.9	16.0
60°-70°	487.4	10.8
70°-80°	214.2	4.7
80°-90°	34.8	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°	1364.9	30.2
0°-40°	2215.0	48.9
0°-60°	3789.6	83.7
0°-90°	4526.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4526.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1796	1796	1796	1796	1796	
5°	1783	1779	1784	1778	1821	168
15°	1707	1688	1698	1707	1708	476
25°	1526	1535	1560	1580	1577	706
35°	1329	1332	1363	1395	1394	825
45°	1069	1089	1107	1135	1109	827
55°	799	794	814	809	809	711
65°	491	484	503	484	487	488
75°	204	200	204	189	196	219
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1795.8	1795.8	1795.8	1795.8	1795.8
2.5°	1811.3	1797.7	1784.9	1799.7	1808.8
5°	1783.0	1778.9	1783.7	1778.4	1821.3
7.5°	1746.4	1762.4	1771.7	1765.9	1768.4
10°	1726.9	1721.4	1742.0	1756.4	1754.3
12.5°	1706.1	1714.4	1715.6	1731.1	1732.5
15°	1707.2	1687.5	1698.0	1706.8	1707.5
17.5°	1640.9	1662.2	1669.4	1689.6	1664.6
20°	1632.8	1617.3	1632.8	1653.4	1650.2
22.5°	1582.9	1565.6	1598.9	1617.3	1616.1
25°	1526.4	1534.7	1559.8	1580.2	1576.9
27.5°	1476.8	1486.5	1522.2	1550.3	1532.2
30°	1438.5	1433.6	1463.8	1488.8	1502.7
32.5°	1370.1	1387.7	1423.0	1447.8	1434.6
35°	1328.6	1332.5	1363.4	1394.9	1394.0
37.5°	1256.0	1274.3	1317.7	1326.5	1318.4
40°	1194.1	1212.4	1251.6	1261.1	1257.2
42.5°	1148.4	1151.7	1185.3	1196.2	1178.8
45°	1068.9	1088.8	1106.9	1135.4	1108.6
47.5°	1001.2	1010.5	1049.4	1057.1	1042.9
50°	939.8	943.0	982.2	972.7	963.4
52.5°	862.5	876.2	898.2	896.4	885.5
55°	799.0	793.7	814.5	809.0	808.7
57.5°	722.7	732.0	749.2	740.3	726.2
60°	651.3	651.5	657.8	647.8	646.0
62.5°	571.8	574.6	576.0	563.7	583.6
65°	490.9	484.4	503.4	484.1	487.4
67.5°	416.4	419.7	417.8	405.8	410.4
70°	340.8	345.0	342.0	328.3	332.5
72.5°	271.7	266.6	269.9	252.7	260.6
75°	204.3	200.1	203.8	189.4	195.9
77.5°	139.1	142.4	140.0	132.4	136.8
80°	91.8	89.3	89.3	84.9	85.8
82.5°	53.6	51.0	50.3	48.9	51.0
85°	25.0	24.3	24.8	24.1	23.2
87.5°	9.0	9.3	9.3	8.8	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)