

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: P590205

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590205
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-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4671.0 lumens
Efficiency: N/A
Efficacy: 108.1 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

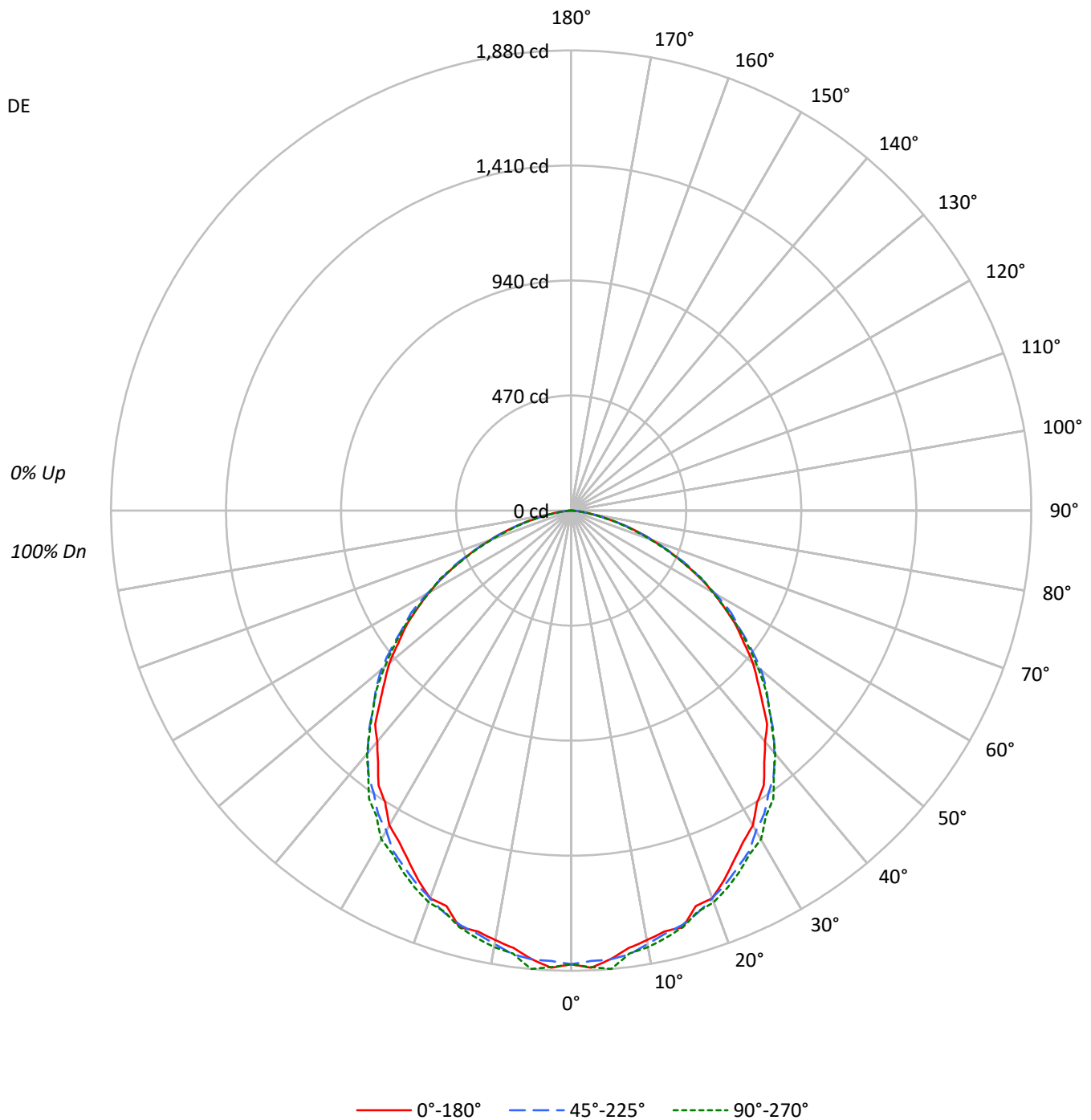
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	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°	4987	4987	4987
5°	4971	4973	5078
10°	4870	4912	4947
15°	4908	4882	4909
20°	4826	4826	4877
25°	4677	4779	4832
30°	4613	4694	4819
35°	4504	4622	4726
40°	4329	4538	4558
45°	4198	4348	4354
50°	4060	4244	4163
55°	3869	3944	3916
60°	3618	3654	3588
65°	3226	3308	3203
70°	2768	2777	2699
75°	2192	2187	2102
80°	1469	1427	1371
85°	797	790	738

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4459 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.3	3.7
10°-20°	494.1	10.6
20°-30°	740.2	15.8
30°-40°	877.3	18.8
40°-50°	879.0	18.8
50°-60°	746.1	16.0
60°-70°	503.0	10.8
70°-80°	221.0	4.7
80°-90°	35.9	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°	1408.7	30.2
0°-40°	2286.0	48.9
0°-60°	3911.1	83.7
0°-90°	4671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4671.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1853	1853	1853	1853	1853	
5°	1840	1836	1841	1835	1880	173
15°	1762	1742	1752	1761	1762	491
25°	1575	1584	1610	1631	1627	728
35°	1371	1375	1407	1440	1439	851
45°	1103	1124	1142	1172	1144	853
55°	825	819	841	835	835	734
65°	507	500	520	500	503	504
75°	211	206	210	196	202	226
85°	26	25	26	25	24	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1853.3	1853.3	1853.3	1853.3	1853.3
2.5°	1869.4	1855.2	1842.1	1857.4	1866.7
5°	1840.2	1835.9	1840.9	1835.4	1879.7
7.5°	1802.4	1818.9	1828.4	1822.5	1825.1
10°	1782.3	1776.5	1797.8	1812.7	1810.5
12.5°	1760.7	1769.3	1770.5	1786.6	1788.0
15°	1761.9	1741.6	1752.4	1761.4	1762.2
17.5°	1693.5	1715.5	1722.9	1743.7	1717.9
20°	1685.1	1669.1	1685.1	1706.4	1703.1
22.5°	1633.7	1615.7	1650.2	1669.1	1667.9
25°	1575.3	1583.9	1609.7	1630.8	1627.4
27.5°	1524.1	1534.1	1571.0	1599.9	1581.3
30°	1484.6	1479.6	1510.7	1536.5	1550.9
32.5°	1414.0	1432.2	1468.5	1494.2	1480.5
35°	1371.2	1375.2	1407.1	1439.6	1438.6
37.5°	1296.3	1315.2	1359.9	1369.0	1360.6
40°	1232.4	1251.3	1291.7	1301.5	1297.5
42.5°	1185.2	1188.6	1223.3	1234.5	1216.6
45°	1103.1	1123.7	1142.4	1171.8	1144.1
47.5°	1033.3	1042.8	1083.0	1090.9	1076.3
50°	969.9	973.2	1013.7	1003.8	994.3
52.5°	890.2	904.3	927.0	925.1	913.9
55°	824.6	819.1	840.6	834.9	834.7
57.5°	745.9	755.5	773.2	764.1	749.5
60°	672.2	672.4	678.9	668.6	666.7
62.5°	590.1	593.0	594.4	581.7	602.3
65°	506.6	499.9	519.5	499.6	503.0
67.5°	429.8	433.1	431.2	418.8	423.6
70°	351.8	356.1	353.0	338.8	343.1
72.5°	280.5	275.2	278.5	260.8	269.0
75°	210.8	206.5	210.3	195.5	202.2
77.5°	143.6	146.9	144.5	136.6	141.2
80°	94.8	92.1	92.1	87.6	88.5
82.5°	55.3	52.6	51.9	50.5	52.6
85°	25.8	25.1	25.6	24.9	23.9
87.5°	9.3	9.6	9.6	9.1	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)