

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: P687852

Luminaire Tested: FLR-HA-24-55-35-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687852
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2303-938-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-24-55-35-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 3500K Luminaire for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

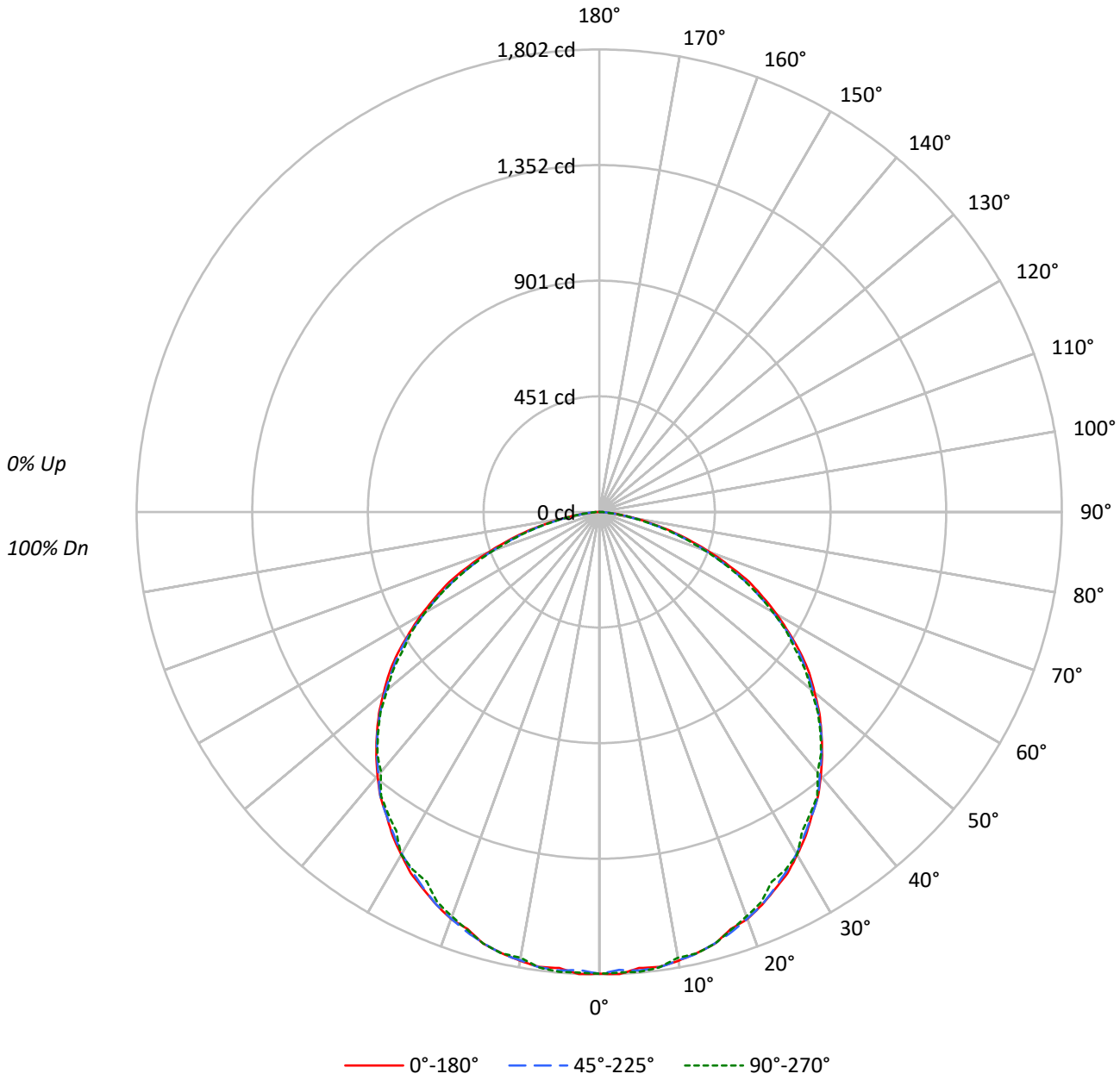
Lumens per Lamp: N/A
Luminaire Lumens: 5054.5 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): 120
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	27	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2421	2421	2421
5°	2410	2422	2429
10°	2426	2424	2410
15°	2427	2424	2426
20°	2417	2414	2401
25°	2407	2402	2360
30°	2396	2389	2395
35°	2371	2372	2356
40°	2360	2348	2323
45°	2330	2326	2318
50°	2293	2276	2251
55°	2246	2225	2182
60°	2148	2102	2102
65°	2050	1967	1946
70°	1805	1733	1712
75°	1507	1431	1445
80°	1077	1013	1007
85°	560	519	546

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 2335 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.6	3.4
10°-20°	490.3	9.7
20°-30°	746.0	14.8
30°-40°	903.8	17.9
40°-50°	941.2	18.6
50°-60°	842.7	16.7
60°-70°	611.8	12.1
70°-80°	297.1	5.9
80°-90°	51.2	1.0
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°	1406.9	27.8
0°-40°	2310.7	45.7
0°-60°	4094.5	81.0
0°-90°	5054.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5054.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1799	1799	1799	1799	1799	
5°	1784	1795	1793	1790	1798	171
15°	1742	1739	1740	1728	1741	490
25°	1621	1625	1618	1615	1590	748
35°	1443	1452	1444	1449	1434	906
45°	1224	1227	1223	1216	1218	945
55°	957	950	948	937	930	852
65°	644	627	618	616	611	628
75°	290	283	275	276	278	308
85°	36	37	34	34	35	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1799.4	1799.4	1799.4	1799.4	1799.4
2.5°	1802.2	1801.3	1786.7	1793.1	1796.7
5°	1784.0	1794.9	1793.1	1789.5	1798.5
7.5°	1788.5	1784.0	1789.5	1788.5	1790.4
10°	1775.8	1771.3	1774.0	1774.9	1764.0
12.5°	1760.4	1757.7	1762.2	1765.8	1761.3
15°	1742.2	1738.6	1740.4	1727.7	1741.3
17.5°	1704.1	1713.2	1715.9	1708.6	1707.7
20°	1687.7	1685.0	1685.9	1683.2	1676.8
22.5°	1656.8	1667.7	1656.8	1651.4	1646.8
25°	1621.4	1625.0	1617.8	1615.0	1589.6
27.5°	1587.8	1586.9	1578.7	1578.7	1571.4
30°	1542.4	1536.0	1537.8	1530.6	1541.5
32.5°	1497.0	1497.9	1489.7	1492.4	1472.4
35°	1443.4	1451.5	1444.3	1448.8	1434.3
37.5°	1399.8	1394.3	1399.8	1392.5	1395.2
40°	1343.5	1341.6	1337.1	1338.9	1322.6
42.5°	1285.3	1282.6	1281.7	1278.1	1279.0
45°	1224.5	1227.2	1222.6	1216.3	1218.1
47.5°	1163.6	1166.3	1158.1	1150.0	1155.4
50°	1095.5	1097.3	1087.3	1084.6	1075.5
52.5°	1031.0	1022.8	1017.4	1012.8	1011.9
55°	957.4	950.1	948.3	937.4	930.2
57.5°	875.7	873.8	868.4	860.2	863.8
60°	798.4	791.2	781.2	779.4	781.2
62.5°	719.4	711.2	698.5	702.2	698.5
65°	644.0	626.8	617.7	615.9	611.3
67.5°	547.7	535.0	527.8	525.0	526.8
70°	458.7	457.8	440.6	437.8	435.1
72.5°	372.4	365.2	355.2	354.3	353.3
75°	289.8	283.4	275.2	276.1	278.0
77.5°	208.9	202.6	195.3	198.0	194.4
80°	139.0	137.2	130.8	129.9	129.9
82.5°	82.7	79.0	75.4	75.4	76.3
85°	36.3	37.2	33.6	33.6	35.4
87.5°	9.1	10.0	9.1	9.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)