

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: P687862

Luminaire Tested: FLR-HA-24-L3C3 (MED)-40-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687862
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-L3C3 (MED)-40-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire at Medium Lumen setting for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

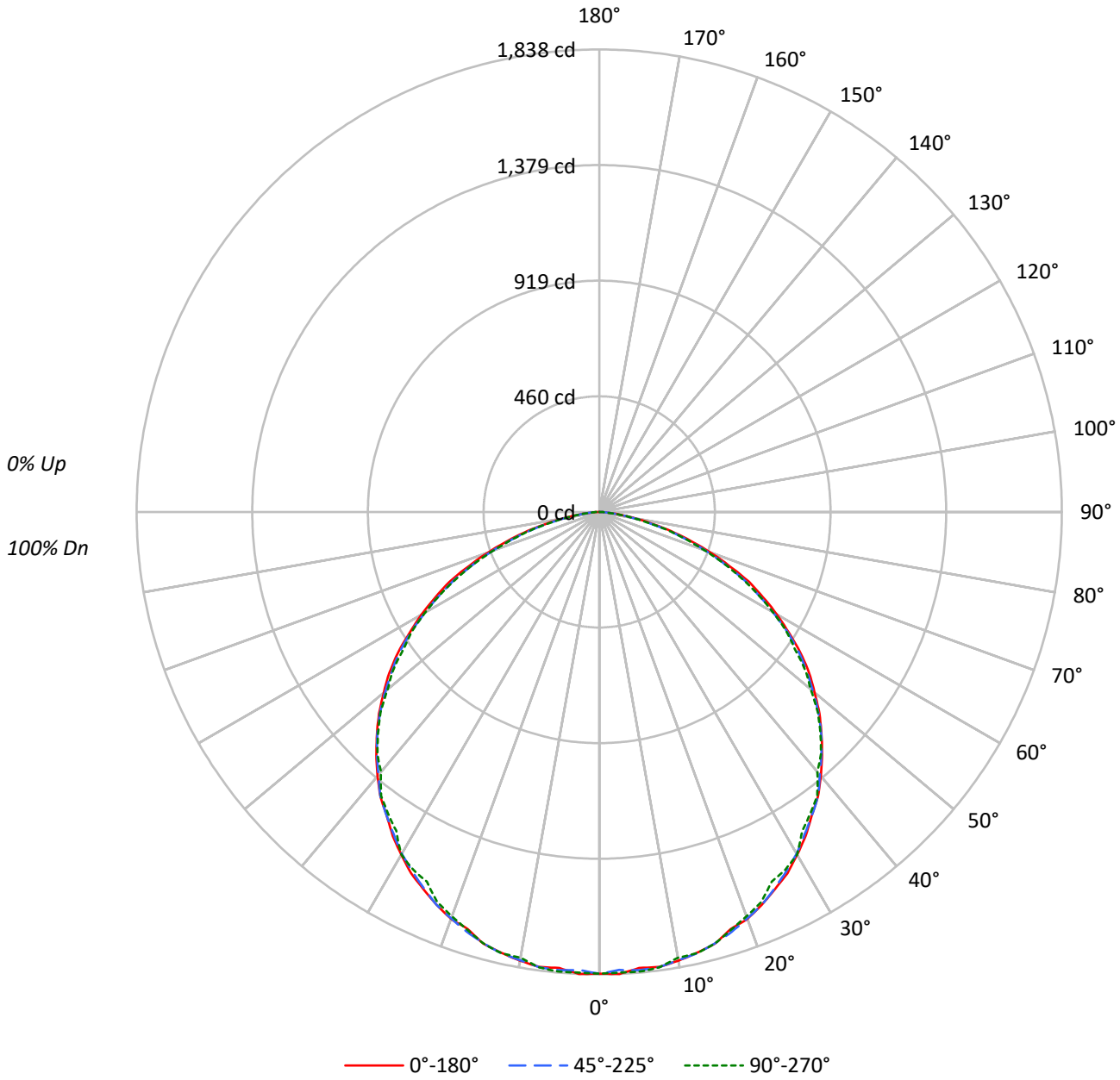
Lumens per Lamp: N/A
Luminaire Lumens: 5154.9 lumens
Efficiency: N/A
Efficacy: 133.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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°	2469	2469	2469
5°	2457	2470	2477
10°	2474	2472	2458
15°	2475	2472	2474
20°	2464	2462	2449
25°	2455	2449	2407
30°	2444	2437	2442
35°	2418	2419	2403
40°	2406	2395	2369
45°	2376	2373	2364
50°	2339	2321	2296
55°	2290	2269	2225
60°	2191	2144	2144
65°	2091	2005	1985
70°	1840	1768	1745
75°	1536	1459	1474
80°	1098	1034	1027
85°	573	530	557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 2381 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.0	3.4
10°-20°	500.0	9.7
20°-30°	760.8	14.8
30°-40°	921.8	17.9
40°-50°	959.8	18.6
50°-60°	859.4	16.7
60°-70°	623.9	12.1
70°-80°	303.0	5.9
80°-90°	52.2	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°	1434.8	27.8
0°-40°	2356.5	45.7
0°-60°	4175.8	81.0
0°-90°	5154.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5154.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1835	1835	1835	1835	1835	
5°	1819	1830	1829	1825	1834	174
15°	1777	1773	1775	1762	1776	500
25°	1654	1657	1650	1647	1621	763
35°	1472	1480	1473	1478	1463	924
45°	1249	1252	1247	1240	1242	963
55°	976	969	967	956	949	869
65°	657	639	630	628	624	641
75°	296	289	281	282	284	314
85°	37	38	34	34	36	55
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1835.2	1835.2	1835.2	1835.2	1835.2
2.5°	1837.9	1837.0	1822.2	1828.7	1832.4
5°	1819.4	1830.5	1828.7	1825.0	1834.2
7.5°	1824.0	1819.4	1825.0	1824.0	1825.9
10°	1811.1	1806.4	1809.2	1810.1	1799.0
12.5°	1795.3	1792.5	1797.2	1800.9	1796.3
15°	1776.8	1773.1	1774.9	1762.0	1775.9
17.5°	1737.9	1747.2	1749.9	1742.5	1741.6
20°	1721.2	1718.4	1719.4	1716.6	1710.1
22.5°	1689.7	1700.8	1689.7	1684.2	1679.5
25°	1653.6	1657.3	1649.9	1647.1	1621.2
27.5°	1619.3	1618.4	1610.0	1610.0	1602.6
30°	1573.0	1566.5	1568.4	1561.0	1572.1
32.5°	1526.7	1527.6	1519.3	1522.0	1501.7
35°	1472.0	1480.4	1472.9	1477.6	1462.8
37.5°	1427.6	1422.0	1427.6	1420.1	1422.9
40°	1370.1	1368.3	1363.6	1365.5	1348.8
42.5°	1310.8	1308.0	1307.1	1303.4	1304.3
45°	1248.8	1251.5	1246.9	1240.4	1242.3
47.5°	1186.7	1189.5	1181.1	1172.8	1178.4
50°	1117.2	1119.1	1108.9	1106.1	1096.8
52.5°	1051.4	1043.1	1037.5	1032.9	1032.0
55°	976.4	969.0	967.1	956.0	948.6
57.5°	893.0	891.2	885.6	877.3	881.0
60°	814.3	806.9	796.7	794.8	796.7
62.5°	733.7	725.4	712.4	716.1	712.4
65°	656.8	639.2	629.9	628.1	623.5
67.5°	558.6	545.6	538.2	535.4	537.3
70°	467.8	466.9	449.3	446.5	443.7
72.5°	379.8	372.4	362.2	361.3	360.4
75°	295.5	289.0	280.7	281.6	283.5
77.5°	213.1	206.6	199.2	202.0	198.2
80°	141.7	139.9	133.4	132.5	132.5
82.5°	84.3	80.6	76.9	76.9	77.8
85°	37.1	38.0	34.3	34.3	36.1
87.5°	9.3	10.2	9.3	9.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)