

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: P687853

Luminaire Tested: FLR-HA-24-55-40-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687853
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-24-55-40-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

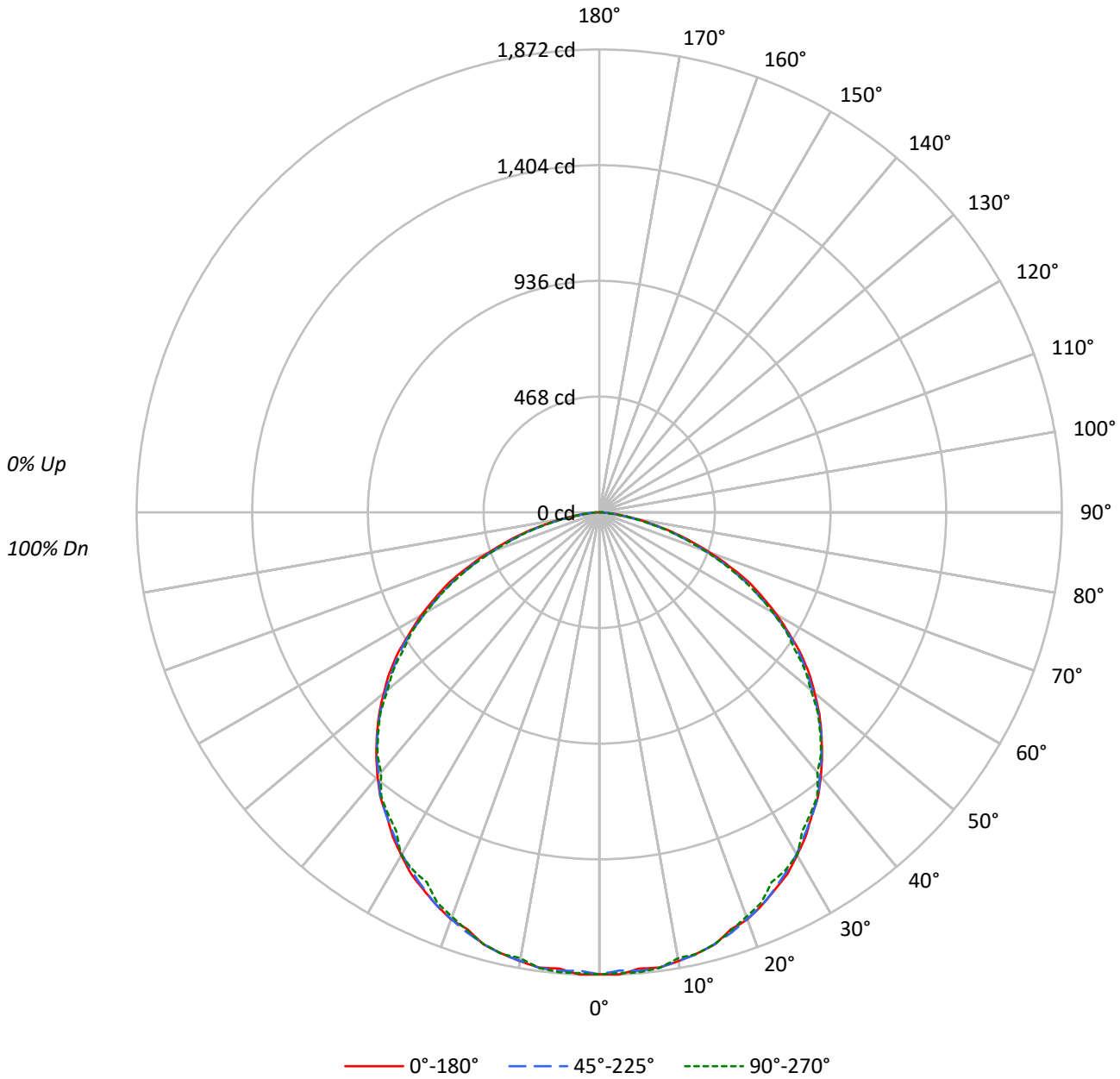
Lumens per Lamp: N/A
Luminaire Lumens: 5249.3 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2514	2514	2514
5°	2502	2515	2523
10°	2520	2517	2503
15°	2520	2518	2519
20°	2510	2507	2493
25°	2500	2494	2451
30°	2489	2481	2487
35°	2462	2464	2447
40°	2451	2439	2412
45°	2420	2416	2407
50°	2381	2364	2338
55°	2332	2310	2266
60°	2231	2183	2183
65°	2129	2042	2021
70°	1874	1800	1778
75°	1564	1486	1501
80°	1118	1052	1045
85°	582	539	568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 2425 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.1	3.4
10°-20°	509.2	9.7
20°-30°	774.7	14.8
30°-40°	938.6	17.9
40°-50°	977.4	18.6
50°-60°	875.1	16.7
60°-70°	635.4	12.1
70°-80°	308.5	5.9
80°-90°	53.1	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°	1461.1	27.8
0°-40°	2399.7	45.7
0°-60°	4252.3	81.0
0°-90°	5249.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5249.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1869	1869	1869	1869	1869	
5°	1853	1864	1862	1858	1868	177
15°	1809	1806	1808	1794	1808	509
25°	1684	1688	1680	1677	1651	777
35°	1499	1508	1500	1505	1490	941
45°	1272	1274	1270	1263	1265	981
55°	994	987	985	974	966	885
65°	669	651	642	640	635	652
75°	301	294	286	287	289	320
85°	38	39	35	35	37	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1868.8	1868.8	1868.8	1868.8	1868.8
2.5°	1871.6	1870.7	1855.6	1862.2	1865.9
5°	1852.7	1864.1	1862.2	1858.4	1867.8
7.5°	1857.5	1852.7	1858.4	1857.5	1859.3
10°	1844.2	1839.5	1842.4	1843.3	1832.0
12.5°	1828.2	1825.4	1830.1	1833.9	1829.2
15°	1809.3	1805.6	1807.5	1794.3	1808.4
17.5°	1769.7	1779.2	1782.0	1774.4	1773.5
20°	1752.7	1749.9	1750.9	1748.0	1741.4
22.5°	1720.7	1732.0	1720.7	1715.0	1710.3
25°	1683.9	1687.7	1680.1	1677.3	1650.9
27.5°	1649.0	1648.0	1639.5	1639.5	1632.0
30°	1601.8	1595.2	1597.1	1589.5	1600.9
32.5°	1554.6	1555.6	1547.1	1549.9	1529.2
35°	1499.0	1507.5	1499.9	1504.6	1489.5
37.5°	1453.7	1448.0	1453.7	1446.2	1449.0
40°	1395.2	1393.3	1388.6	1390.5	1373.5
42.5°	1334.8	1332.0	1331.1	1327.3	1328.2
45°	1271.6	1274.5	1269.7	1263.1	1265.0
47.5°	1208.4	1211.3	1202.8	1194.3	1199.9
50°	1137.7	1139.6	1129.2	1126.4	1116.9
52.5°	1070.7	1062.2	1056.6	1051.8	1050.9
55°	994.3	986.7	984.9	973.5	966.0
57.5°	909.4	907.5	901.8	893.4	897.1
60°	829.2	821.7	811.3	809.4	811.3
62.5°	747.1	738.6	725.4	729.2	725.4
65°	668.8	650.9	641.5	639.6	634.9
67.5°	568.8	555.6	548.1	545.3	547.1
70°	476.4	475.4	457.5	454.7	451.9
72.5°	386.8	379.2	368.8	367.9	367.0
75°	300.9	294.3	285.8	286.8	288.7
77.5°	217.0	210.4	202.8	205.7	201.9
80°	144.3	142.4	135.8	134.9	134.9
82.5°	85.8	82.1	78.3	78.3	79.2
85°	37.7	38.7	34.9	34.9	36.8
87.5°	9.4	10.4	9.4	9.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)