

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: P688119

Luminaire Tested: FLR-HA-24-45-35-CP250

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688119
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-24-45-35-CP250
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 3500K Luminaire for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

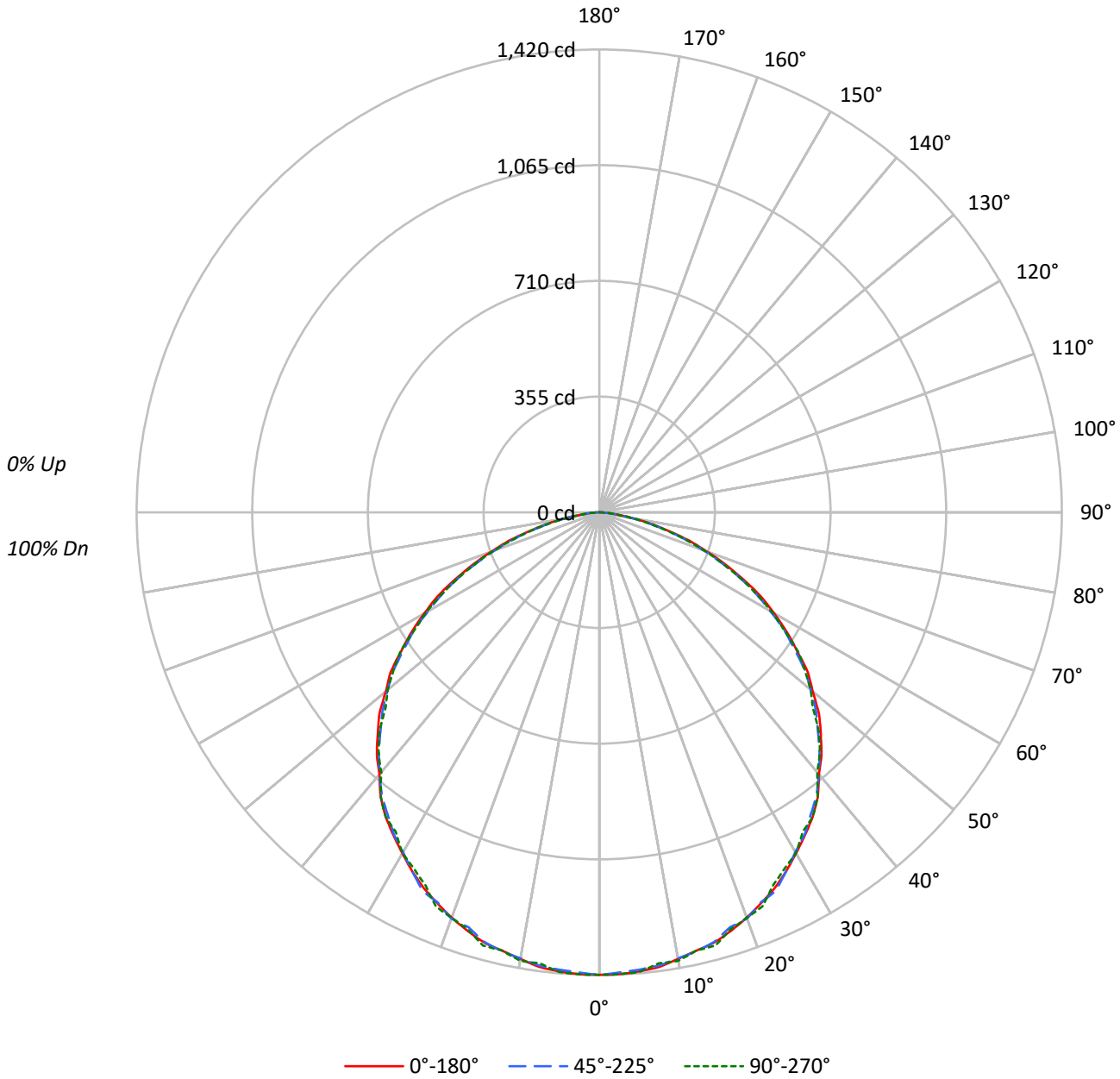
Lumens per Lamp: N/A
Luminaire Lumens: 3934.6 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 38.8
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	90	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1910	1910	1910
5°	1910	1903	1912
10°	1901	1899	1909
15°	1904	1901	1917
20°	1895	1900	1896
25°	1890	1904	1874
30°	1877	1870	1876
35°	1876	1860	1876
40°	1843	1841	1828
45°	1830	1807	1815
50°	1789	1775	1773
55°	1738	1713	1748
60°	1666	1630	1648
65°	1554	1520	1522
70°	1377	1338	1353
75°	1133	1090	1106
80°	795	777	789
85°	408	384	384

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1830 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.2	3.4
10°-20°	385.1	9.8
20°-30°	585.4	14.9
30°-40°	708.0	18.0
40°-50°	733.7	18.6
50°-60°	654.9	16.6
60°-70°	470.3	12.0
70°-80°	225.6	5.7
80°-90°	37.5	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°	1104.7	28.1
0°-40°	1812.7	46.1
0°-60°	3201.3	81.4
0°-90°	3934.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3934.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1414	1419	1409	1410	1416	134
15°	1367	1368	1364	1364	1376	385
25°	1273	1270	1282	1266	1263	586
35°	1142	1133	1132	1128	1142	712
45°	962	955	950	949	954	741
55°	741	732	730	729	745	664
65°	488	474	477	471	478	483
75°	218	204	210	210	213	236
85°	26	25	25	25	25	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1419.5	1419.5	1419.5	1419.5	1419.5
2.5°	1418.8	1420.3	1413.5	1412.0	1418.8
5°	1414.2	1418.8	1409.0	1409.7	1415.7
7.5°	1407.5	1404.4	1402.9	1408.2	1396.1
10°	1391.6	1398.4	1390.1	1386.3	1397.6
12.5°	1378.0	1378.8	1379.5	1381.1	1377.3
15°	1366.7	1368.2	1364.5	1364.5	1376.5
17.5°	1346.4	1349.4	1335.0	1344.1	1341.1
20°	1323.7	1320.7	1326.7	1324.5	1324.5
22.5°	1298.8	1298.8	1295.8	1297.3	1309.4
25°	1273.2	1270.2	1282.2	1266.4	1262.6
27.5°	1242.3	1239.3	1242.3	1234.0	1232.5
30°	1208.3	1200.8	1203.8	1204.6	1207.6
32.5°	1175.1	1167.6	1172.9	1167.6	1162.3
35°	1142.0	1132.9	1132.1	1127.6	1142.0
37.5°	1102.0	1092.2	1095.9	1081.6	1101.2
40°	1049.2	1043.1	1048.4	1043.9	1040.9
42.5°	1010.0	1003.2	1000.9	997.9	1002.4
45°	961.7	954.9	949.6	948.9	954.1
47.5°	914.9	897.6	902.1	895.3	889.3
50°	854.6	850.1	847.8	841.0	847.0
52.5°	807.8	791.2	795.0	789.0	795.7
55°	740.7	732.4	730.1	728.6	745.2
57.5°	682.6	672.0	673.6	669.8	672.0
60°	619.2	609.4	605.7	604.9	612.5
62.5°	559.7	539.3	542.3	541.6	545.3
65°	488.0	473.7	477.4	470.7	478.2
67.5°	419.4	405.0	406.5	405.0	408.8
70°	350.0	334.1	340.2	337.2	343.9
72.5°	289.6	270.8	276.1	270.8	276.8
75°	218.0	203.7	209.7	209.7	212.7
77.5°	160.7	147.8	152.4	150.9	153.9
80°	102.6	97.3	100.3	98.1	101.8
82.5°	58.8	55.1	55.1	56.6	57.3
85°	26.4	24.9	24.9	24.9	24.9
87.5°	6.8	6.8	6.8	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)