

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: P688030

Luminaire Tested: FLR-HA-24-45-40-CP375

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688030
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-24-45-40-CP375
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

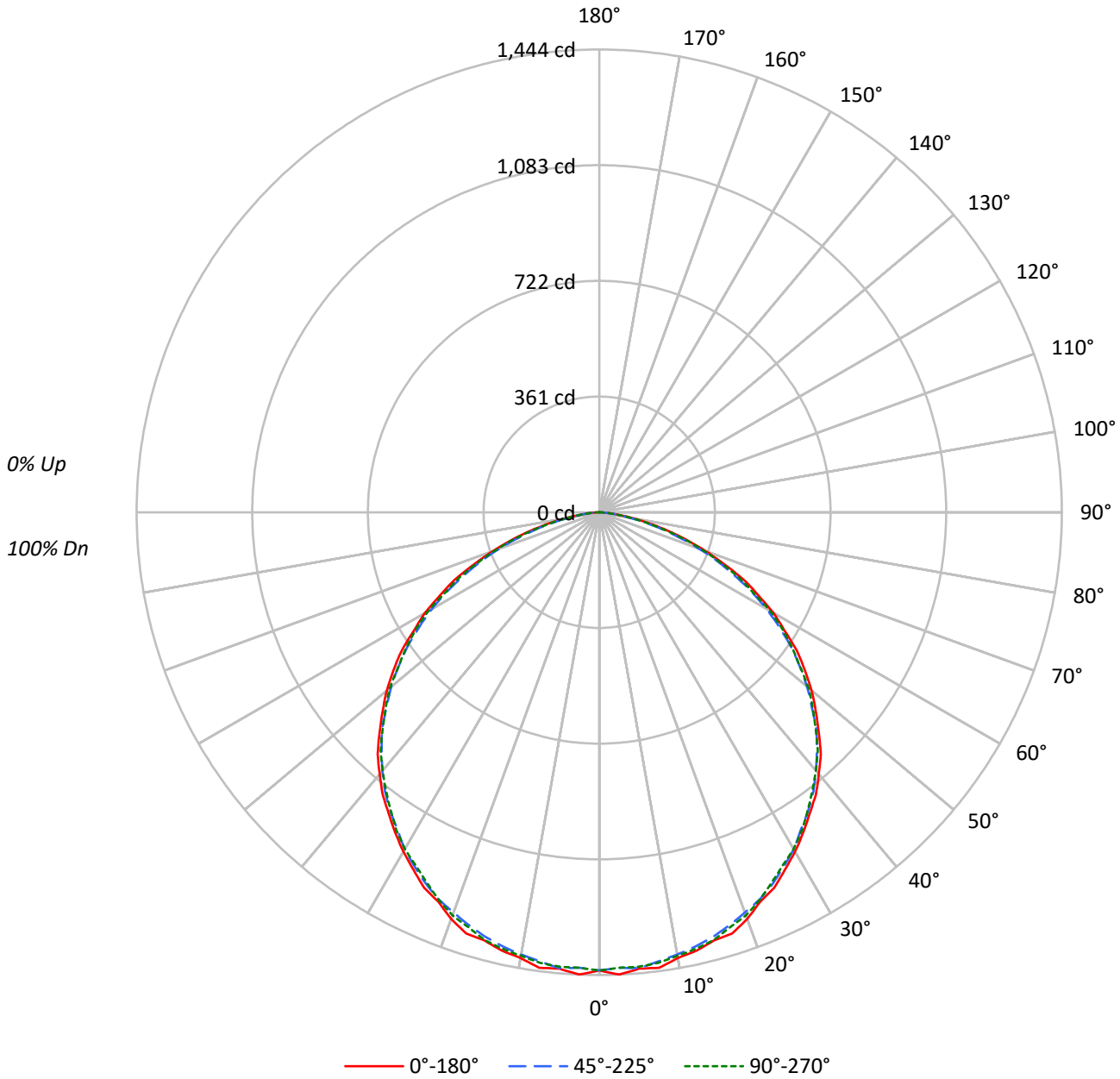
Lumens per Lamp: N/A
Luminaire Lumens: 3940.1 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
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°	1923	1923	1923
5°	1931	1929	1922
10°	1930	1915	1920
15°	1927	1911	1925
20°	1934	1903	1917
25°	1920	1900	1892
30°	1900	1886	1885
35°	1882	1868	1864
40°	1873	1849	1848
45°	1844	1824	1818
50°	1812	1774	1786
55°	1766	1712	1722
60°	1690	1621	1659
65°	1584	1481	1529
70°	1387	1297	1347
75°	1148	1035	1091
80°	814	728	759
85°	411	363	387

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1844 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.3	3.4
10°-20°	388.4	9.9
20°-30°	589.7	15.0
30°-40°	711.6	18.1
40°-50°	737.8	18.7
50°-60°	653.6	16.6
60°-70°	466.6	11.8
70°-80°	221.0	5.6
80°-90°	36.2	0.9
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°	1113.3	28.3
0°-40°	1825.0	46.3
0°-60°	3216.3	81.6
0°-90°	3940.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3940.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1430	1430	1430	1430	1430	
5°	1430	1422	1428	1418	1423	136
15°	1383	1376	1372	1379	1382	392
25°	1293	1272	1280	1281	1274	594
35°	1146	1134	1137	1133	1135	718
45°	969	955	959	956	956	748
55°	753	732	730	727	734	669
65°	497	465	465	468	480	486
75°	221	203	199	204	210	235
85°	27	24	24	23	25	40
90°	0	0	0	0	0	

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CATALOG NUMBER: FLR-HA-24-45-40-CP375

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1429.5	1429.5	1429.5	1429.5	1429.5
2.5°	1443.6	1418.6	1422.5	1425.6	1422.5
5°	1429.5	1422.5	1428.0	1417.8	1423.3
7.5°	1433.4	1416.2	1413.9	1410.7	1417.8
10°	1412.3	1402.1	1401.3	1406.8	1405.2
12.5°	1401.3	1392.7	1388.0	1388.8	1395.1
15°	1383.3	1375.5	1371.6	1379.4	1381.7
17.5°	1378.6	1351.2	1351.2	1352.8	1357.5
20°	1350.4	1332.4	1329.3	1332.4	1338.7
22.5°	1314.4	1308.1	1308.1	1310.5	1308.9
25°	1293.2	1272.1	1279.9	1280.7	1274.4
27.5°	1256.4	1248.6	1247.0	1243.9	1241.5
30°	1222.7	1210.2	1214.1	1214.1	1213.3
32.5°	1185.1	1176.5	1172.6	1173.4	1177.3
35°	1146.0	1134.2	1137.3	1132.6	1135.0
37.5°	1110.7	1095.0	1098.2	1095.8	1093.5
40°	1066.1	1053.5	1052.8	1048.8	1052.0
42.5°	1023.8	1005.8	1005.0	1005.8	1009.7
45°	968.9	954.8	958.8	955.6	955.6
47.5°	916.5	907.1	900.0	900.8	903.9
50°	865.5	847.5	847.5	841.3	853.0
52.5°	809.1	791.1	788.8	791.1	789.6
55°	752.7	731.6	730.0	726.9	733.9
57.5°	684.6	664.2	665.8	667.4	677.6
60°	628.2	600.8	602.4	603.9	616.5
62.5°	558.5	535.8	535.0	537.3	540.5
65°	497.4	465.3	465.3	468.4	480.2
67.5°	419.8	400.3	399.5	403.4	408.1
70°	352.5	329.8	329.8	334.5	342.3
72.5°	285.1	266.3	263.2	270.2	275.7
75°	220.9	202.9	199.0	203.7	209.9
77.5°	158.2	146.5	143.3	148.0	149.6
80°	105.0	94.8	94.0	96.3	97.9
82.5°	60.3	54.0	51.7	54.0	54.8
85°	26.6	24.3	23.5	22.7	25.1
87.5°	6.3	6.3	6.3	6.3	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)