

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: P688300

Luminaire Tested: FLR-HA-24-45-40-CP125

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688300  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-HA-24-45-40-CP125  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire for High Abuse  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

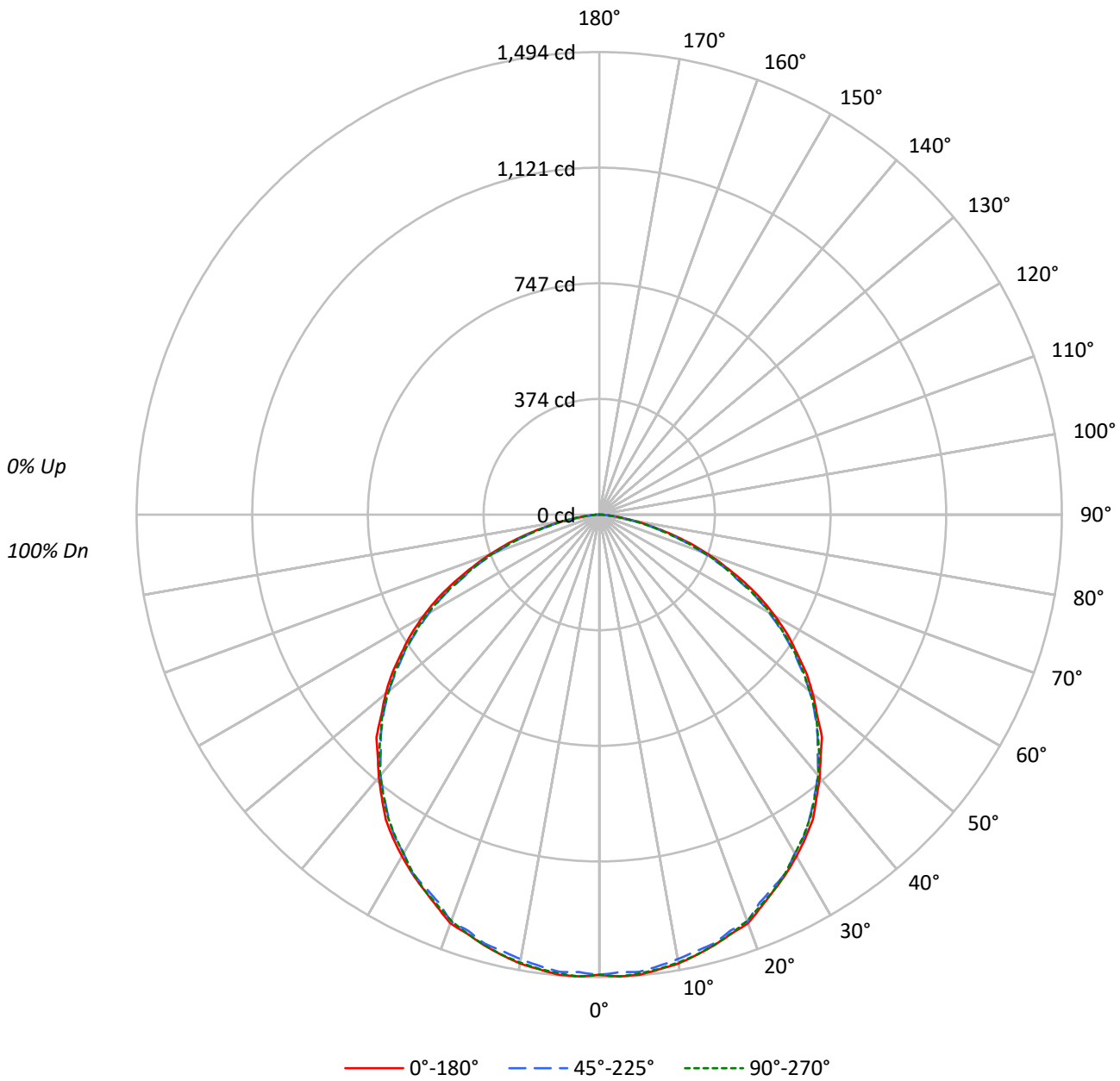
Lumens per Lamp: N/A  
Luminaire Lumens: 4124.2 lumens  
Efficiency: N/A  
Efficacy: 106.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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	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	54	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	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	45	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	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°	2000	2000	2000
5°	2015	2003	2009
10°	2012	1993	2008
15°	2005	1998	2004
20°	2012	2003	2000
25°	1986	1973	1985
30°	1980	1963	1964
35°	1975	1952	1955
40°	1945	1930	1933
45°	1936	1896	1899
50°	1884	1858	1858
55°	1828	1788	1799
60°	1764	1703	1726
65°	1643	1558	1573
70°	1473	1389	1411
75°	1213	1140	1136
80°	850	801	801
85°	460	411	411

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1936 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.0	3.4
10°-20°	404.6	9.8
20°-30°	614.9	14.9
30°-40°	743.7	18.0
40°-50°	769.9	18.7
50°-60°	684.0	16.6
60°-70°	491.4	11.9
70°-80°	235.0	5.7
80°-90°	39.6	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°	1160.5	28.1
0°-40°	1904.2	46.2
0°-60°	3358.1	81.4
0°-90°	4124.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4124.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1487	1487	1487	1487	1487	
5°	1492	1482	1483	1484	1487	142
15°	1440	1430	1434	1431	1439	407
25°	1338	1331	1329	1335	1337	618
35°	1202	1194	1188	1187	1190	749
45°	1017	1002	996	993	998	779
55°	779	772	762	757	767	698
65°	516	511	490	477	494	510
75°	233	230	219	200	218	251
85°	30	28	27	25	27	42
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1486.6	1486.6	1486.6	1486.6	1486.6
2.5°	1492.9	1481.9	1479.5	1493.6	1493.6
5°	1492.1	1481.9	1482.7	1484.2	1487.4
7.5°	1481.9	1476.4	1470.9	1476.4	1480.3
10°	1472.5	1460.0	1458.4	1460.7	1469.4
12.5°	1456.8	1442.7	1444.3	1448.2	1456.0
15°	1439.6	1430.2	1434.1	1431.0	1438.8
17.5°	1419.2	1419.2	1409.1	1406.7	1418.5
20°	1405.1	1385.6	1398.9	1387.1	1396.5
22.5°	1369.9	1358.9	1355.8	1365.2	1365.2
25°	1337.8	1330.7	1329.2	1334.6	1337.0
27.5°	1307.2	1303.3	1304.9	1304.1	1304.1
30°	1274.3	1264.2	1263.4	1263.4	1264.2
32.5°	1239.1	1232.0	1231.3	1226.6	1228.9
35°	1202.3	1194.4	1188.2	1186.6	1190.5
37.5°	1152.9	1143.5	1142.7	1144.3	1144.3
40°	1107.5	1097.3	1098.9	1093.4	1100.5
42.5°	1058.2	1049.5	1044.1	1042.5	1051.1
45°	1017.4	1002.5	996.3	993.2	997.8
47.5°	953.2	949.3	943.0	937.5	948.5
50°	899.9	902.3	887.4	881.9	887.4
52.5°	843.6	833.4	823.2	813.8	829.5
55°	779.3	771.5	762.1	757.4	766.8
57.5°	720.6	712.0	697.9	686.9	703.4
60°	655.6	647.7	632.9	621.1	641.5
62.5°	589.0	580.4	566.3	547.5	568.6
65°	516.2	510.7	489.5	477.0	494.2
67.5°	442.5	439.4	426.9	405.7	430.8
70°	374.4	368.1	353.2	334.4	358.7
72.5°	307.0	296.1	285.1	267.1	287.4
75°	233.4	229.5	219.3	200.5	218.5
77.5°	169.2	165.3	158.2	144.1	158.2
80°	109.7	108.9	103.4	93.2	103.4
82.5°	62.7	62.7	58.7	54.8	58.7
85°	29.8	28.2	26.6	25.1	26.6
87.5°	7.8	7.8	7.8	7.8	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)