

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: P687857

Luminaire Tested: FLR-HA-24-L3C3 (HI)-50-CA08

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P687857  
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 (HI)-50-CA08  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 5000K Luminaire at High Lumen setting for High Abuse  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

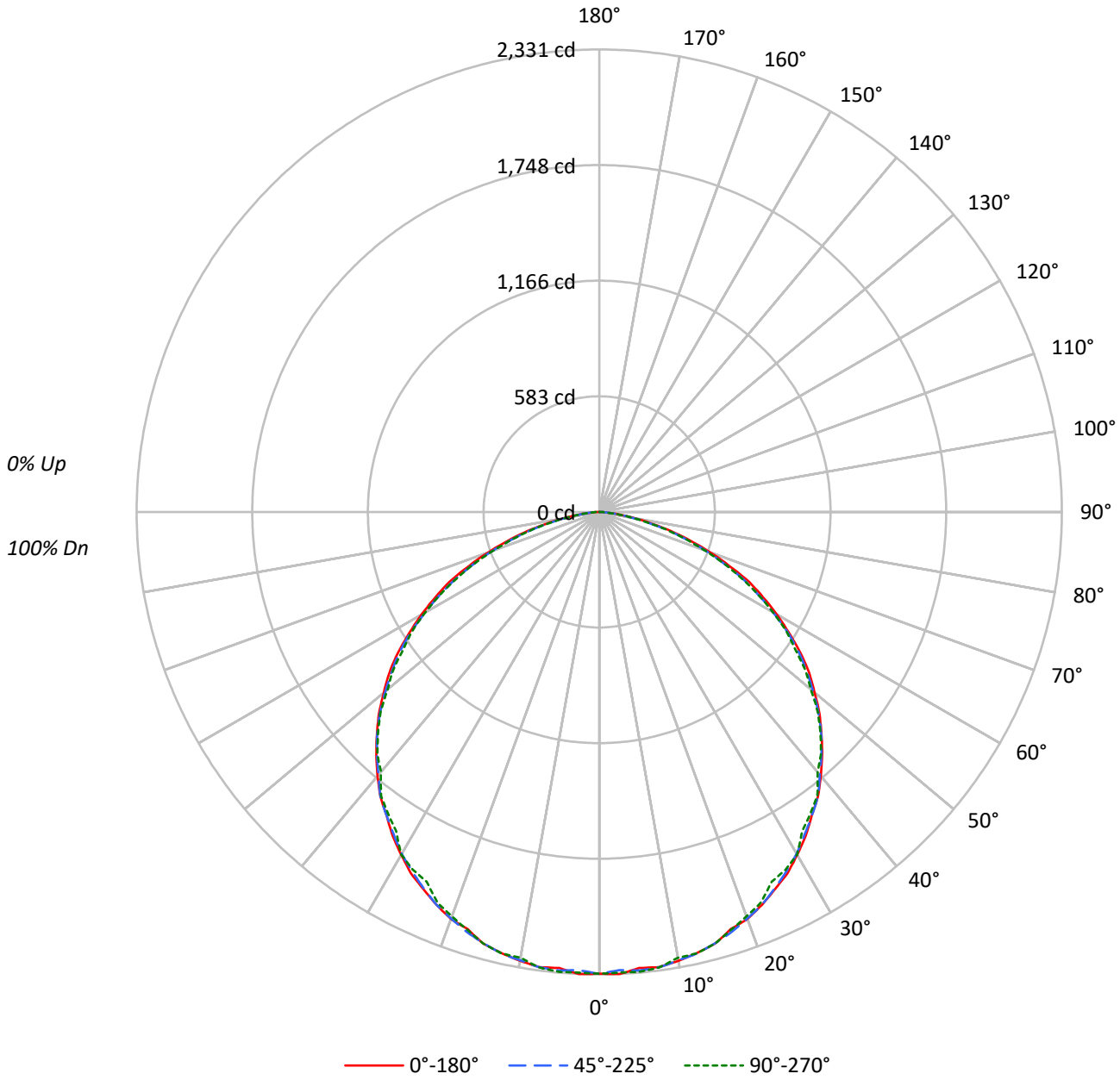
Lumens per Lamp: N/A  
Luminaire Lumens: 6538.7 lumens  
Efficiency: N/A  
Efficacy: 123.8 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 52.8  
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°	3132	3132	3132
5°	3117	3133	3143
10°	3139	3135	3118
15°	3139	3136	3138
20°	3126	3123	3106
25°	3114	3107	3053
30°	3100	3091	3098
35°	3067	3069	3048
40°	3052	3038	3005
45°	3014	3010	2998
50°	2966	2944	2912
55°	2905	2878	2823
60°	2780	2720	2720
65°	2652	2544	2518
70°	2334	2242	2214
75°	1948	1851	1869
80°	1393	1311	1302
85°	726	672	707

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 3021 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.7	3.4
10°-20°	634.3	9.7
20°-30°	965.0	14.8
30°-40°	1169.2	17.9
40°-50°	1217.5	18.6
50°-60°	1090.1	16.7
60°-70°	791.4	12.1
70°-80°	384.3	5.9
80°-90°	66.2	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°	1820.0	27.8
0°-40°	2989.2	45.7
0°-60°	5296.8	81.0
0°-90°	6538.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6538.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2328	2328	2328	2328	2328	
5°	2308	2322	2320	2315	2327	221
15°	2254	2249	2251	2235	2253	634
25°	2098	2102	2093	2089	2056	968
35°	1867	1878	1868	1874	1855	1172
45°	1584	1588	1582	1573	1576	1222
55°	1238	1229	1227	1213	1203	1102
65°	833	811	799	797	791	813
75°	375	367	356	357	360	399
85°	47	48	44	44	46	69
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2327.8	2327.8	2327.8	2327.8	2327.8
2.5°	2331.4	2330.2	2311.4	2319.6	2324.3
5°	2307.9	2322.0	2319.6	2314.9	2326.7
7.5°	2313.7	2307.9	2314.9	2313.7	2316.1
10°	2297.3	2291.4	2294.9	2296.1	2282.0
12.5°	2277.3	2273.8	2279.6	2284.4	2278.5
15°	2253.8	2249.1	2251.4	2235.0	2252.6
17.5°	2204.4	2216.2	2219.7	2210.3	2209.1
20°	2183.3	2179.8	2180.9	2177.4	2169.2
22.5°	2143.3	2157.4	2143.3	2136.3	2130.4
25°	2097.5	2102.2	2092.8	2089.3	2056.4
27.5°	2054.0	2052.9	2042.3	2042.3	2032.9
30°	1995.3	1987.1	1989.4	1980.0	1994.1
32.5°	1936.5	1937.7	1927.1	1930.7	1904.8
35°	1867.2	1877.8	1868.4	1874.2	1855.4
37.5°	1810.8	1803.7	1810.8	1801.4	1804.9
40°	1737.9	1735.6	1729.7	1732.1	1710.9
42.5°	1662.7	1659.2	1658.0	1653.3	1654.5
45°	1584.0	1587.5	1581.7	1573.4	1575.8
47.5°	1505.3	1508.8	1498.2	1487.6	1494.7
50°	1417.1	1419.5	1406.6	1403.0	1391.3
52.5°	1333.7	1323.1	1316.1	1310.2	1309.0
55°	1238.5	1229.1	1226.8	1212.7	1203.3
57.5°	1132.8	1130.4	1123.4	1112.8	1117.5
60°	1032.9	1023.5	1010.6	1008.2	1010.6
62.5°	930.7	920.1	903.6	908.3	903.6
65°	833.1	810.8	799.1	796.7	790.8
67.5°	708.6	692.1	682.7	679.2	681.5
70°	593.4	592.2	569.9	566.4	562.9
72.5°	481.8	472.4	459.5	458.3	457.1
75°	374.8	366.6	356.0	357.2	359.6
77.5°	270.3	262.0	252.6	256.2	251.5
80°	179.8	177.4	169.2	168.0	168.0
82.5°	106.9	102.2	97.5	97.5	98.7
85°	47.0	48.2	43.5	43.5	45.8
87.5°	11.8	12.9	11.8	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)