

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: P688216

Luminaire Tested: FLR-HA-24-L3C3 (HI)-40-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688216
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-13)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-24-L3C3 (HI)-40-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire at High Lumen setting for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

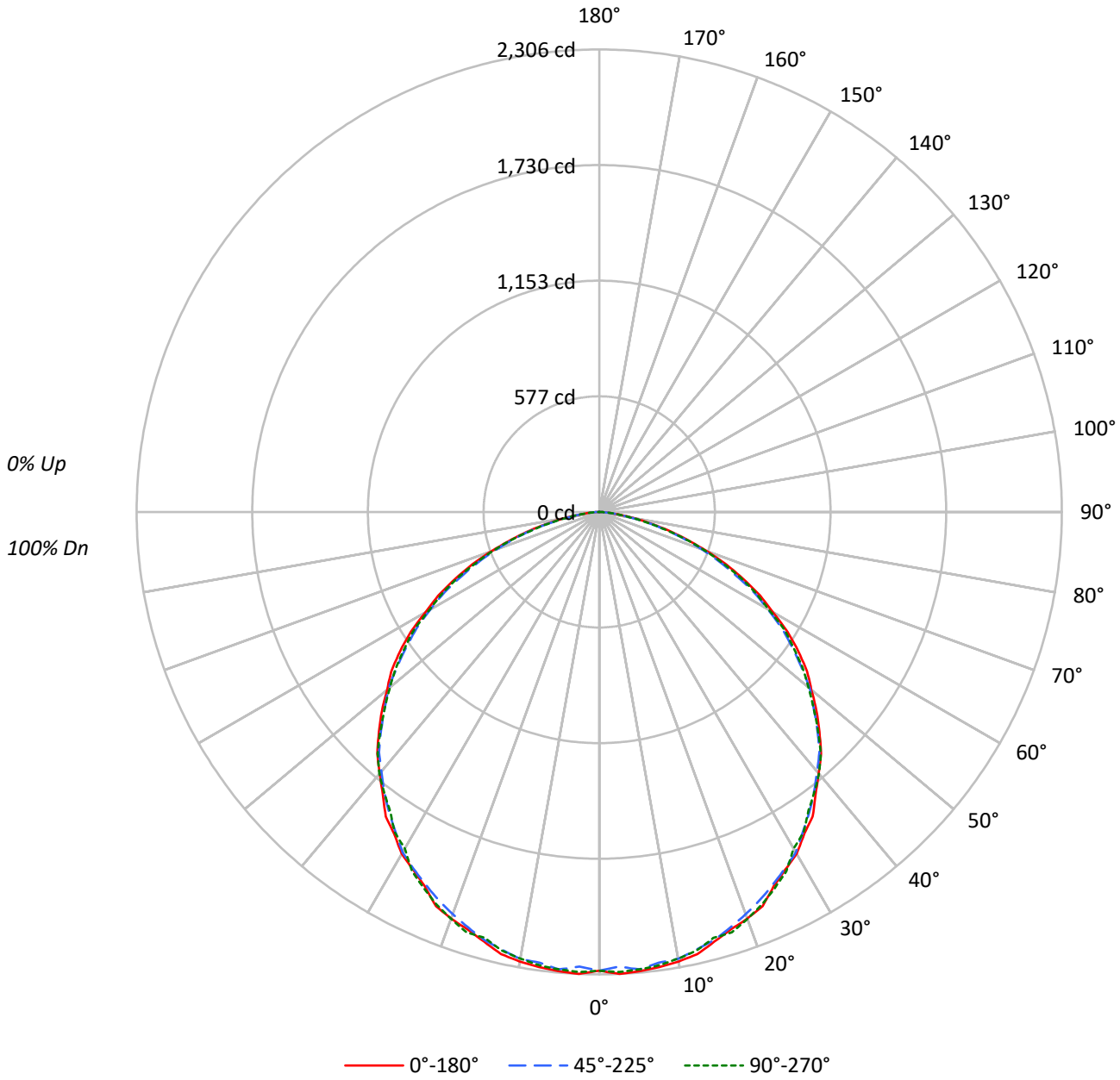
Lumens per Lamp: N/A
Luminaire Lumens: 6349.4 lumens
Efficiency: N/A
Efficacy: 125.2 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 50.7
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	79	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	57	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°	3078	3078	3078
5°	3106	3093	3093
10°	3110	3092	3090
15°	3089	3079	3064
20°	3090	3057	3092
25°	3057	3042	3073
30°	3058	3045	3011
35°	3046	3000	2986
40°	2989	2966	2994
45°	2954	2924	2934
50°	2889	2869	2848
55°	2842	2750	2776
60°	2685	2612	2626
65°	2526	2406	2479
70°	2236	2131	2198
75°	1843	1761	1754
80°	1316	1222	1222
85°	642	622	642

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2954 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	3.4
10°-20°	623.2	9.8
20°-30°	947.1	14.9
30°-40°	1145.0	18.0
40°-50°	1186.4	18.7
50°-60°	1054.6	16.6
60°-70°	756.2	11.9
70°-80°	360.0	5.7
80°-90°	59.6	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°	1787.7	28.2
0°-40°	2932.6	46.2
0°-60°	5173.6	81.5
0°-90°	6349.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6349.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2288	2288	2288	2288	2288	
5°	2300	2289	2290	2279	2290	219
15°	2218	2210	2210	2198	2200	627
25°	2059	2054	2049	2048	2070	953
35°	1855	1825	1827	1828	1818	1153
45°	1553	1536	1537	1531	1542	1197
55°	1212	1175	1172	1179	1184	1078
65°	794	751	756	765	779	783
75°	355	320	339	341	337	377
85°	42	37	40	40	42	63
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2287.5	2287.5	2287.5	2287.5	2287.5
2.5°	2305.9	2293.7	2269.2	2285.1	2296.1
5°	2299.8	2288.8	2290.0	2279.0	2290.0
7.5°	2288.8	2277.8	2266.8	2263.1	2280.2
10°	2276.5	2255.8	2263.1	2254.5	2261.9
12.5°	2258.2	2241.1	2236.2	2225.2	2241.1
15°	2217.9	2210.5	2210.5	2198.3	2199.5
17.5°	2182.4	2167.7	2172.6	2166.5	2198.3
20°	2157.9	2134.7	2134.7	2131.1	2159.2
22.5°	2127.4	2100.5	2094.4	2096.8	2118.8
25°	2058.9	2054.0	2049.1	2047.9	2069.9
27.5°	2010.0	1996.6	2005.1	2001.5	2019.8
30°	1968.4	1945.2	1959.9	1946.4	1937.9
32.5°	1902.4	1893.9	1890.2	1891.4	1895.1
35°	1854.7	1825.4	1826.6	1827.8	1818.1
37.5°	1771.6	1775.3	1759.4	1759.4	1761.8
40°	1701.9	1697.0	1688.5	1688.5	1704.4
42.5°	1637.1	1615.1	1624.9	1610.2	1634.7
45°	1552.7	1535.6	1536.9	1530.7	1541.7
47.5°	1469.6	1454.9	1450.0	1454.9	1450.0
50°	1380.4	1370.6	1370.6	1365.7	1360.8
52.5°	1305.8	1271.5	1269.1	1276.4	1277.7
55°	1211.6	1175.0	1172.5	1178.6	1183.5
57.5°	1112.6	1069.8	1078.4	1088.1	1094.3
60°	997.7	967.1	970.8	986.7	975.7
62.5°	904.7	863.2	869.3	882.7	882.7
65°	793.5	750.7	755.6	765.4	778.8
67.5°	685.9	640.7	648.0	659.0	662.7
70°	568.5	520.8	541.6	552.6	558.7
72.5°	456.0	419.4	437.7	443.8	448.7
75°	354.6	320.3	338.7	341.1	337.4
77.5°	251.9	227.4	242.1	247.0	243.3
80°	169.9	145.5	157.7	161.4	157.7
82.5°	92.9	85.6	90.5	91.7	89.3
85°	41.6	36.7	40.3	40.3	41.6
87.5°	12.2	11.0	11.0	12.2	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)