

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: P687861

Luminaire Tested: FLR-HA-24-L3C3 (MED)-35-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687861
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 (MED)-35-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 3500K Luminaire at Medium Lumen setting for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

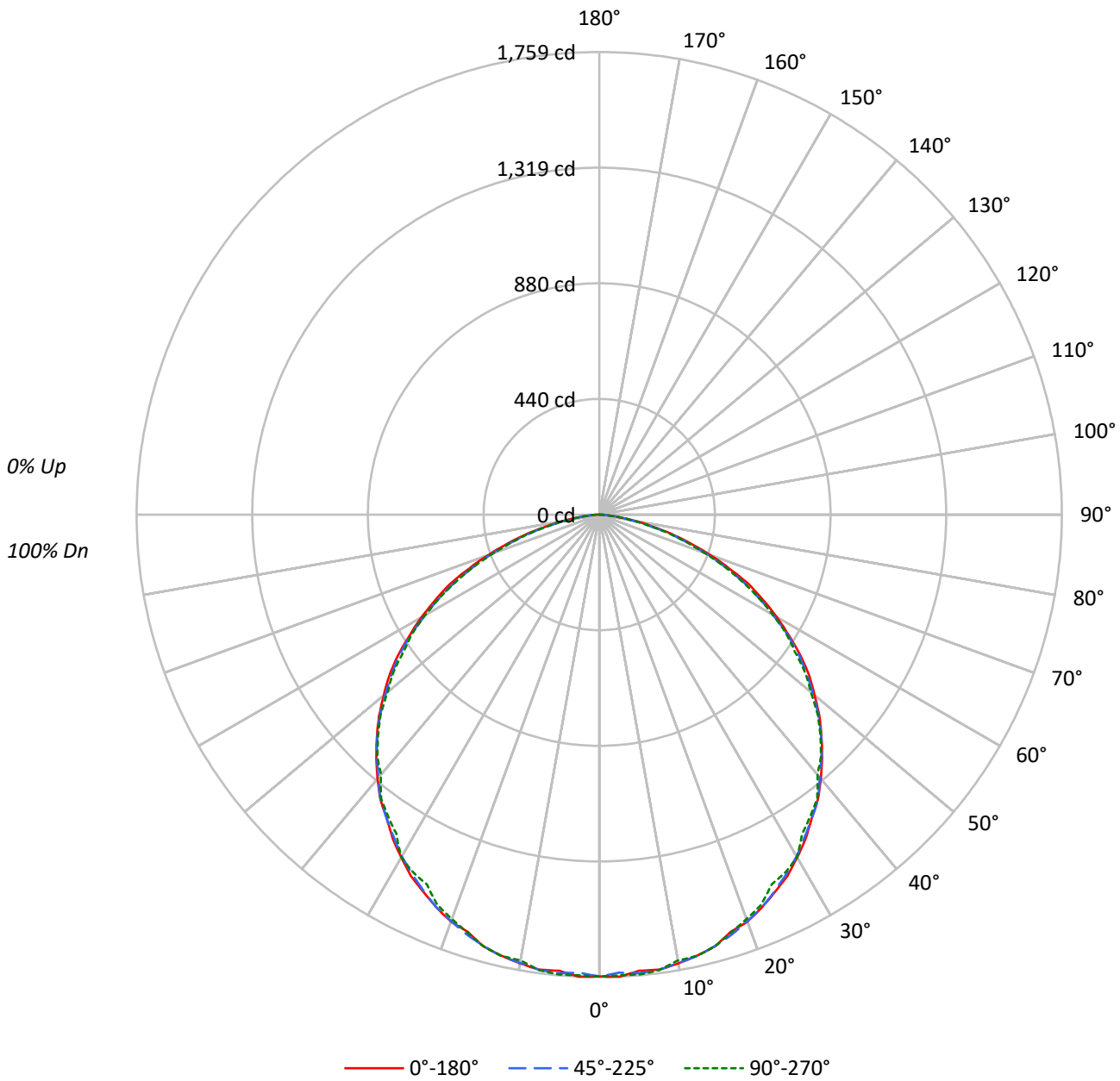
Lumens per Lamp: N/A
Luminaire Lumens: 4933.6 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.7
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	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°	2363	2363	2363
5°	2352	2364	2371
10°	2368	2366	2352
15°	2369	2366	2367
20°	2359	2356	2343
25°	2350	2344	2303
30°	2339	2332	2338
35°	2314	2315	2300
40°	2303	2292	2267
45°	2274	2271	2262
50°	2238	2222	2197
55°	2192	2171	2130
60°	2097	2052	2052
65°	2001	1919	1900
70°	1761	1692	1671
75°	1470	1396	1410
80°	1051	989	982
85°	548	506	534

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 2279 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.5	3.4
10°-20°	478.6	9.7
20°-30°	728.1	14.8
30°-40°	882.2	17.9
40°-50°	918.6	18.6
50°-60°	822.5	16.7
60°-70°	597.1	12.1
70°-80°	289.9	5.9
80°-90°	50.0	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°	1373.2	27.8
0°-40°	2255.4	45.7
0°-60°	3996.5	81.0
0°-90°	4933.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4933.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1756	1756	1756	1756	1756	
5°	1741	1752	1750	1747	1756	166
15°	1700	1697	1699	1686	1700	479
25°	1583	1586	1579	1576	1552	730
35°	1409	1417	1410	1414	1400	884
45°	1195	1198	1193	1187	1189	922
55°	934	927	926	915	908	832
65°	629	612	603	601	597	613
75°	283	277	269	270	271	301
85°	36	36	33	33	35	52
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1756.4	1756.4	1756.4	1756.4	1756.4
2.5°	1759.0	1758.1	1744.0	1750.2	1753.7
5°	1741.3	1751.9	1750.2	1746.6	1755.5
7.5°	1745.7	1741.3	1746.6	1745.7	1747.5
10°	1733.3	1728.9	1731.6	1732.4	1721.8
12.5°	1718.3	1715.6	1720.0	1723.6	1719.1
15°	1700.5	1697.0	1698.7	1686.3	1699.6
17.5°	1663.3	1672.1	1674.8	1667.7	1666.8
20°	1647.3	1644.7	1645.5	1642.9	1636.7
22.5°	1617.2	1627.8	1617.2	1611.9	1607.4
25°	1582.6	1586.1	1579.1	1576.4	1551.6
27.5°	1549.8	1548.9	1540.9	1540.9	1533.8
30°	1505.5	1499.3	1501.0	1493.9	1504.6
32.5°	1461.1	1462.0	1454.0	1456.7	1437.2
35°	1408.8	1416.8	1409.7	1414.1	1400.0
37.5°	1366.3	1360.9	1366.3	1359.2	1361.8
40°	1311.3	1309.5	1305.1	1306.9	1290.9
42.5°	1254.6	1251.9	1251.0	1247.5	1248.3
45°	1195.2	1197.8	1193.4	1187.2	1188.9
47.5°	1135.7	1138.4	1130.4	1122.4	1127.8
50°	1069.3	1071.0	1061.3	1058.6	1049.7
52.5°	1006.3	998.3	993.0	988.6	987.7
55°	934.5	927.4	925.6	915.0	907.9
57.5°	854.7	852.9	847.6	839.6	843.2
60°	779.3	772.2	762.5	760.7	762.5
62.5°	702.2	694.2	681.8	685.4	681.8
65°	628.6	611.8	602.9	601.1	596.7
67.5°	534.6	522.2	515.1	512.5	514.2
70°	447.7	446.9	430.0	427.3	424.7
72.5°	363.5	356.4	346.7	345.8	344.9
75°	282.8	276.6	268.6	269.5	271.3
77.5°	203.9	197.7	190.6	193.3	189.7
80°	135.7	133.9	127.7	126.8	126.8
82.5°	80.7	77.1	73.6	73.6	74.5
85°	35.5	36.4	32.8	32.8	34.6
87.5°	8.9	9.8	8.9	8.9	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)