

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: P687859

Luminaire Tested: FLR-HA-24-L3C3 (LOW)-40-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687859
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 (LOW)-40-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire at Low Lumen setting for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

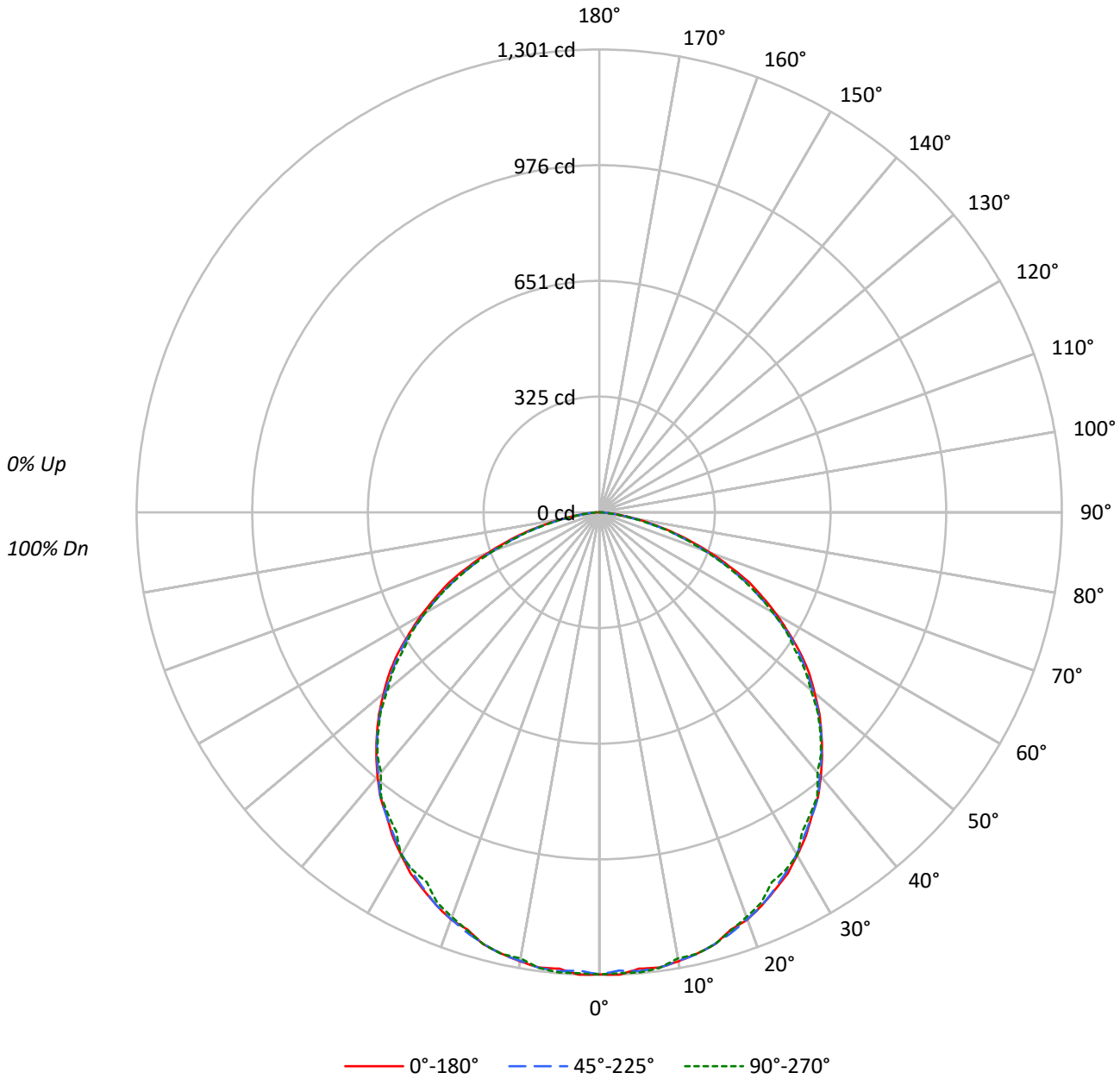
Lumens per Lamp: N/A
Luminaire Lumens: 3649.0 lumens
Efficiency: N/A
Efficacy: 134.7 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 27.1
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°	1748	1748	1748
5°	1739	1748	1754
10°	1752	1750	1740
15°	1752	1750	1751
20°	1745	1743	1733
25°	1738	1734	1704
30°	1730	1725	1729
35°	1712	1713	1701
40°	1704	1695	1677
45°	1682	1680	1673
50°	1656	1643	1625
55°	1621	1606	1575
60°	1551	1518	1518
65°	1480	1420	1405
70°	1303	1251	1236
75°	1088	1033	1043
80°	777	731	727
85°	404	375	395

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 1686 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.1	3.4
10°-20°	354.0	9.7
20°-30°	538.5	14.8
30°-40°	652.5	17.9
40°-50°	679.5	18.6
50°-60°	608.3	16.7
60°-70°	441.7	12.1
70°-80°	214.5	5.9
80°-90°	37.0	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°	1015.7	27.8
0°-40°	1668.1	45.7
0°-60°	2956.0	81.0
0°-90°	3649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3649.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1288	1296	1294	1292	1298	123
15°	1258	1255	1256	1247	1257	354
25°	1170	1173	1168	1166	1148	540
35°	1042	1048	1043	1046	1036	654
45°	884	886	883	878	879	682
55°	691	686	685	677	672	615
65°	465	452	446	445	441	453
75°	209	205	199	199	201	222
85°	26	27	24	24	26	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1299.1	1299.1	1299.1	1299.1	1299.1
2.5°	1301.0	1300.4	1289.9	1294.5	1297.1
5°	1287.9	1295.8	1294.5	1291.9	1298.4
7.5°	1291.2	1287.9	1291.9	1291.2	1292.5
10°	1282.0	1278.7	1280.7	1281.4	1273.5
12.5°	1270.9	1268.9	1272.2	1274.8	1271.5
15°	1257.8	1255.1	1256.4	1247.3	1257.1
17.5°	1230.2	1236.8	1238.7	1233.5	1232.8
20°	1218.4	1216.4	1217.1	1215.1	1210.5
22.5°	1196.1	1204.0	1196.1	1192.2	1188.9
25°	1170.5	1173.2	1167.9	1166.0	1147.6
27.5°	1146.3	1145.6	1139.7	1139.7	1134.5
30°	1113.5	1108.9	1110.2	1105.0	1112.8
32.5°	1080.7	1081.4	1075.5	1077.4	1063.0
35°	1042.0	1047.9	1042.7	1045.9	1035.5
37.5°	1010.5	1006.6	1010.5	1005.3	1007.3
40°	969.9	968.6	965.3	966.6	954.8
42.5°	927.9	925.9	925.3	922.7	923.3
45°	884.0	885.9	882.7	878.1	879.4
47.5°	840.0	842.0	836.1	830.2	834.1
50°	790.9	792.2	785.0	783.0	776.4
52.5°	744.3	738.4	734.5	731.2	730.5
55°	691.2	685.9	684.6	676.8	671.5
57.5°	632.2	630.8	626.9	621.0	623.6
60°	576.4	571.2	564.0	562.6	564.0
62.5°	519.4	513.5	504.3	506.9	504.3
65°	464.9	452.5	445.9	444.6	441.3
67.5°	395.4	386.2	381.0	379.0	380.3
70°	331.2	330.5	318.0	316.1	314.1
72.5°	268.9	263.6	256.4	255.7	255.1
75°	209.2	204.6	198.7	199.4	200.7
77.5°	150.8	146.2	141.0	143.0	140.3
80°	100.3	99.0	94.4	93.8	93.8
82.5°	59.7	57.1	54.4	54.4	55.1
85°	26.2	26.9	24.3	24.3	25.6
87.5°	6.6	7.2	6.6	6.6	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)