

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: P688221

Luminaire Tested: FLR-HA-24-L3C3 (MED)-35-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688221
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 (MED)-35-CP187
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

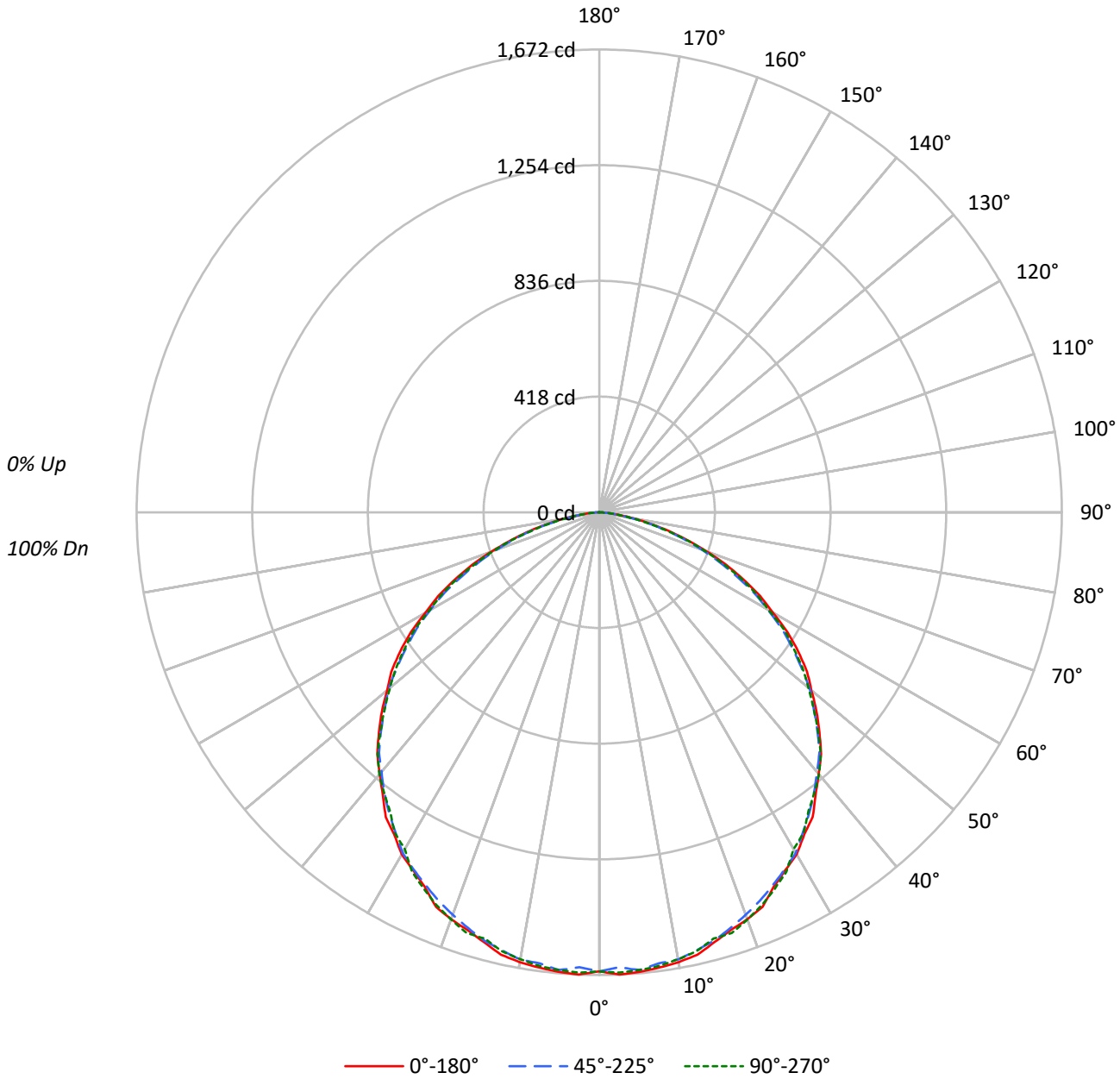
Lumens per Lamp: N/A
Luminaire Lumens: 4603.8 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	2232	2232	2232
5°	2252	2243	2243
10°	2255	2242	2241
15°	2240	2233	2221
20°	2240	2216	2242
25°	2216	2206	2228
30°	2217	2208	2183
35°	2209	2175	2165
40°	2167	2150	2171
45°	2142	2120	2127
50°	2095	2080	2065
55°	2061	1994	2013
60°	1947	1894	1904
65°	1832	1744	1798
70°	1622	1545	1594
75°	1337	1277	1272
80°	955	886	886
85°	465	452	465

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2142 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.5	3.4
10°-20°	451.9	9.8
20°-30°	686.7	14.9
30°-40°	830.2	18.0
40°-50°	860.2	18.7
50°-60°	764.6	16.6
60°-70°	548.3	11.9
70°-80°	261.0	5.7
80°-90°	43.3	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°	1296.2	28.2
0°-40°	2126.3	46.2
0°-60°	3751.2	81.5
0°-90°	4603.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4603.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1659	1659	1659	1659	1659	
5°	1668	1660	1660	1652	1660	159
15°	1608	1603	1603	1594	1595	455
25°	1493	1489	1486	1485	1501	691
35°	1345	1324	1324	1325	1318	836
45°	1126	1113	1114	1110	1118	868
55°	878	852	850	855	858	781
65°	575	544	548	555	565	568
75°	257	232	246	247	245	273
85°	30	27	29	29	30	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1658.6	1658.6	1658.6	1658.6	1658.6
2.5°	1671.9	1663.1	1645.3	1656.8	1664.8
5°	1667.5	1659.5	1660.4	1652.4	1660.4
7.5°	1659.5	1651.5	1643.6	1640.9	1653.3
10°	1650.6	1635.6	1640.9	1634.7	1640.0
12.5°	1637.3	1624.9	1621.4	1613.4	1624.9
15°	1608.1	1602.8	1602.8	1593.9	1594.8
17.5°	1582.4	1571.7	1575.3	1570.9	1593.9
20°	1564.7	1547.8	1547.8	1545.2	1565.5
22.5°	1542.5	1523.0	1518.6	1520.3	1536.3
25°	1492.8	1489.3	1485.8	1484.9	1500.8
27.5°	1457.4	1447.6	1453.8	1451.2	1464.5
30°	1427.2	1410.4	1421.0	1411.3	1405.1
32.5°	1379.4	1373.2	1370.5	1371.4	1374.1
35°	1344.8	1323.5	1324.4	1325.3	1318.2
37.5°	1284.5	1287.2	1275.7	1275.7	1277.4
40°	1234.0	1230.4	1224.2	1224.2	1235.8
42.5°	1187.0	1171.1	1178.1	1167.5	1185.2
45°	1125.8	1113.4	1114.3	1109.9	1117.9
47.5°	1065.6	1054.9	1051.4	1054.9	1051.4
50°	1000.8	993.8	993.8	990.2	986.7
52.5°	946.8	921.9	920.2	925.5	926.4
55°	878.5	851.9	850.1	854.6	858.1
57.5°	806.7	775.7	781.9	789.0	793.4
60°	723.4	701.2	703.9	715.4	707.4
62.5°	656.0	625.9	630.3	640.0	640.0
65°	575.3	544.3	547.9	554.9	564.7
67.5°	497.3	464.5	469.8	477.8	480.5
70°	412.2	377.6	392.7	400.7	405.1
72.5°	330.7	304.1	317.4	321.8	325.3
75°	257.1	232.3	245.6	247.3	244.7
77.5°	182.6	164.9	175.5	179.1	176.4
80°	123.2	105.5	114.4	117.0	114.4
82.5°	67.4	62.1	65.6	66.5	64.7
85°	30.1	26.6	29.3	29.3	30.1
87.5°	8.9	8.0	8.0	8.9	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)