

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: P688212

Luminaire Tested: FLR-HA-24-55-35-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688212
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-24-55-35-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 3500K Luminaire for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

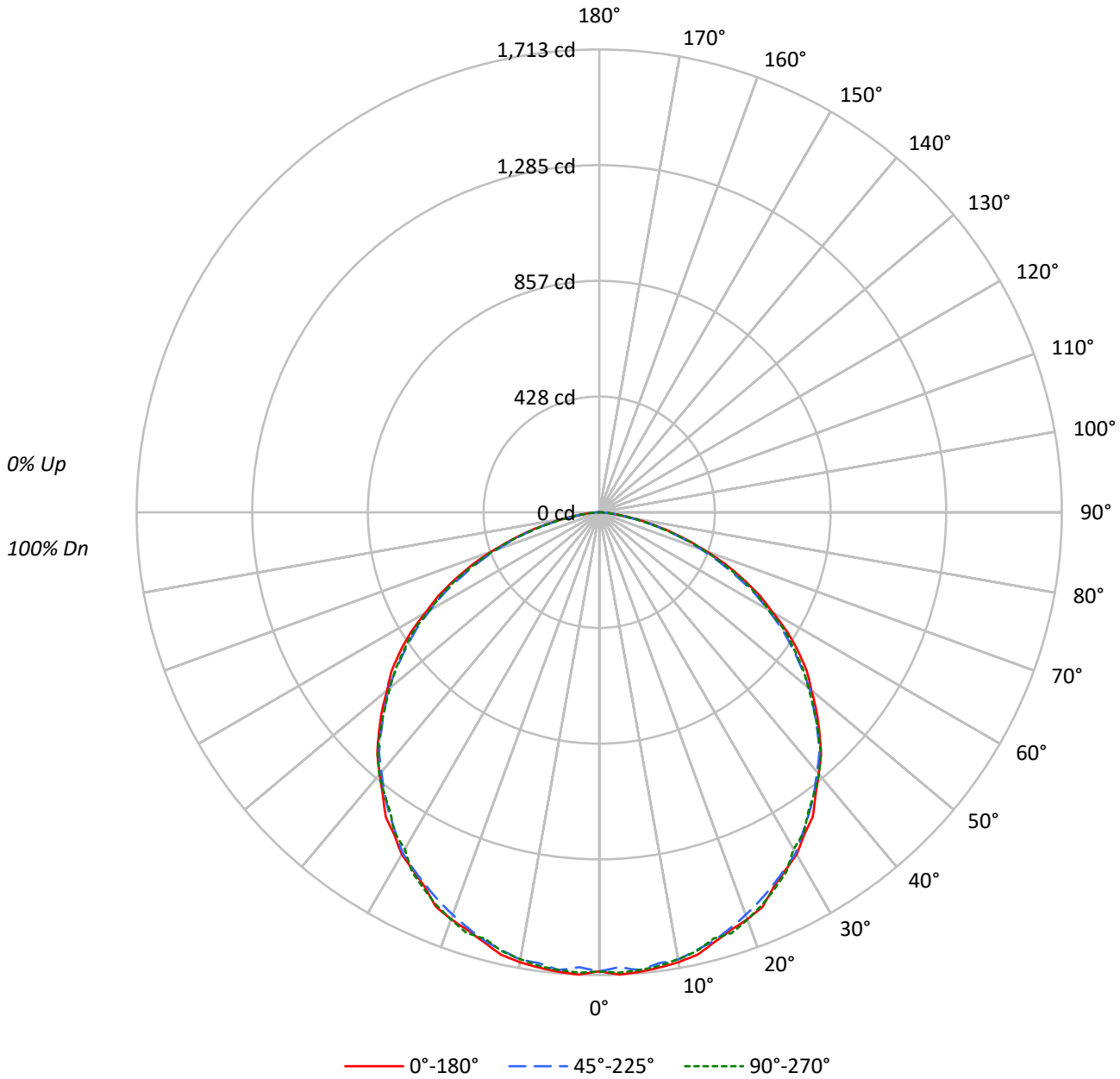
Lumens per Lamp: N/A
Luminaire Lumens: 4716.7 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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	50	30	10
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°	2286	2286	2286
5°	2307	2298	2298
10°	2310	2297	2296
15°	2295	2287	2276
20°	2295	2271	2297
25°	2271	2260	2283
30°	2272	2262	2236
35°	2263	2229	2218
40°	2221	2203	2224
45°	2195	2172	2179
50°	2146	2131	2116
55°	2111	2043	2062
60°	1994	1940	1950
65°	1876	1787	1842
70°	1661	1583	1633
75°	1369	1308	1303
80°	978	908	908
85°	477	463	477

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2195 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.4	3.4
10°-20°	463.0	9.8
20°-30°	703.6	14.9
30°-40°	850.5	18.0
40°-50°	881.3	18.7
50°-60°	783.4	16.6
60°-70°	561.7	11.9
70°-80°	267.4	5.7
80°-90°	44.3	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°	1328.0	28.2
0°-40°	2178.5	46.2
0°-60°	3843.2	81.5
0°-90°	4716.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4716.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1699	1699	1699	1699	1699	
5°	1708	1700	1701	1693	1701	162
15°	1648	1642	1642	1633	1634	466
25°	1530	1526	1522	1521	1538	708
35°	1378	1356	1357	1358	1350	857
45°	1153	1141	1142	1137	1145	889
55°	900	873	871	876	879	800
65°	589	558	561	569	578	582
75°	263	238	252	253	251	280
85°	31	27	30	30	31	47
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1699.3	1699.3	1699.3	1699.3	1699.3
2.5°	1712.9	1703.8	1685.7	1697.5	1705.7
5°	1708.4	1700.2	1701.1	1692.9	1701.1
7.5°	1700.2	1692.0	1683.9	1681.1	1693.8
10°	1691.1	1675.7	1681.1	1674.8	1680.2
12.5°	1677.5	1664.8	1661.1	1653.0	1664.8
15°	1647.5	1642.1	1642.1	1633.0	1633.9
17.5°	1621.2	1610.3	1613.9	1609.4	1633.0
20°	1603.0	1585.8	1585.8	1583.0	1603.9
22.5°	1580.3	1560.3	1555.8	1557.6	1574.0
25°	1529.5	1525.8	1522.2	1521.3	1537.6
27.5°	1493.1	1483.1	1489.5	1486.8	1500.4
30°	1462.2	1445.0	1455.9	1445.9	1439.5
32.5°	1413.2	1406.8	1404.1	1405.0	1407.8
35°	1377.8	1356.0	1356.9	1357.8	1350.5
37.5°	1316.0	1318.7	1306.9	1306.9	1308.8
40°	1264.3	1260.6	1254.3	1254.3	1266.1
42.5°	1216.1	1199.8	1207.0	1196.1	1214.3
45°	1153.4	1140.7	1141.6	1137.1	1145.3
47.5°	1091.7	1080.8	1077.2	1080.8	1077.2
50°	1025.4	1018.1	1018.1	1014.5	1010.9
52.5°	970.0	944.6	942.7	948.2	949.1
55°	900.1	872.8	871.0	875.5	879.2
57.5°	826.5	794.7	801.1	808.3	812.9
60°	741.1	718.4	721.1	732.9	724.8
62.5°	672.1	641.2	645.7	655.7	655.7
65°	589.4	557.7	561.3	568.6	578.5
67.5°	509.5	475.9	481.4	489.5	492.3
70°	422.3	386.9	402.3	410.5	415.1
72.5°	338.8	311.5	325.1	329.7	333.3
75°	263.4	238.0	251.6	253.4	250.7
77.5°	187.1	168.9	179.8	183.5	180.7
80°	126.2	108.1	117.2	119.9	117.2
82.5°	69.0	63.6	67.2	68.1	66.3
85°	30.9	27.2	30.0	30.0	30.9
87.5°	9.1	8.2	8.2	9.1	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)