

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: P688390

Luminaire Tested: FLR-HA-24-45-40-CA125

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688390
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2303-938-2)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-24-45-40-CA125
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

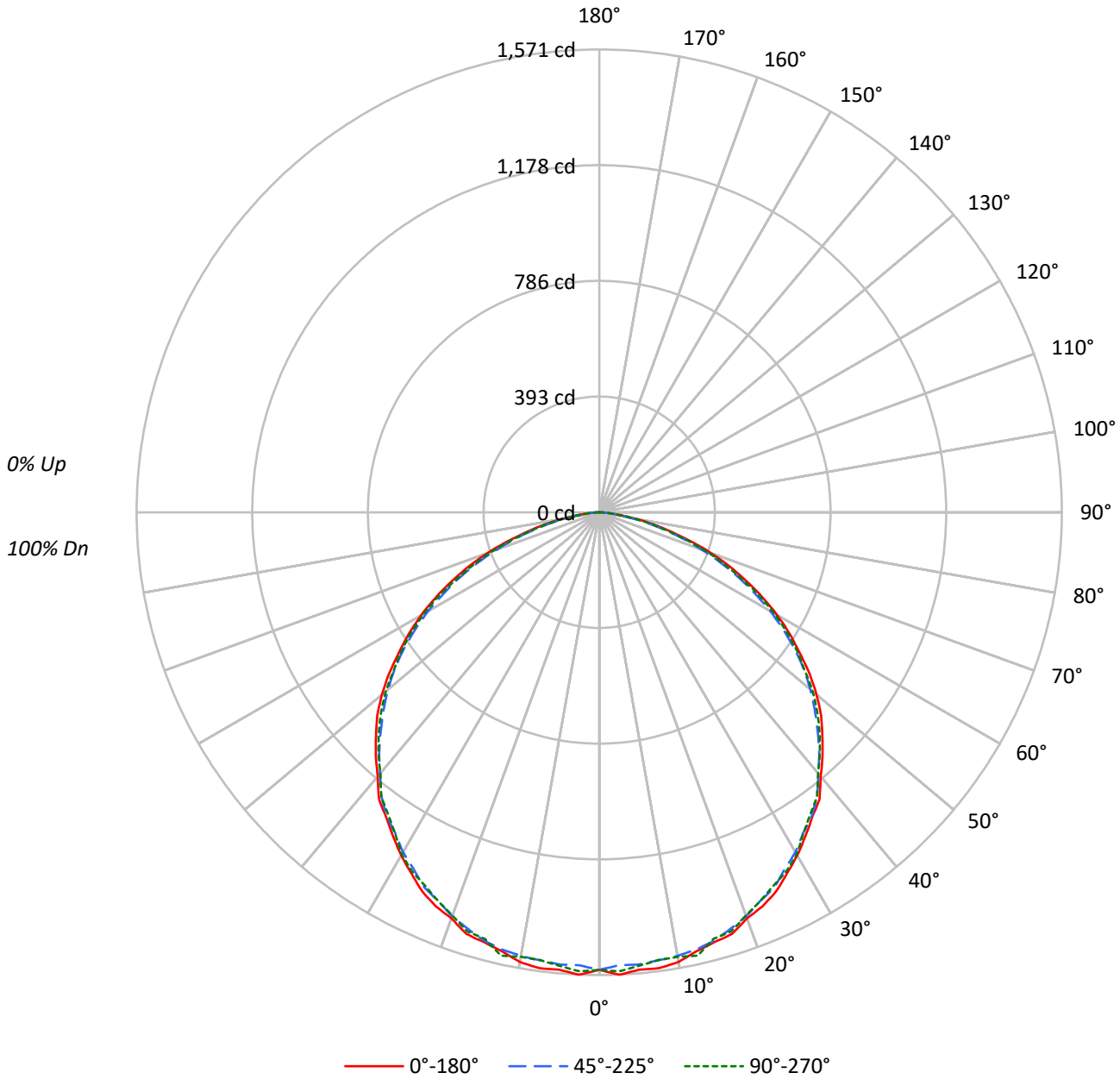
Lumens per Lamp: N/A
Luminaire Lumens: 4363.8 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 38.8
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	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	90	91	89	87	85
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	29	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2090	2090	2090
5°	2105	2081	2087
10°	2118	2089	2093
15°	2105	2098	2088
20°	2101	2089	2086
25°	2109	2086	2077
30°	2089	2070	2083
35°	2073	2067	2053
40°	2055	2033	2031
45°	2039	1996	2014
50°	2017	1959	1981
55°	1946	1902	1924
60°	1876	1804	1844
65°	1753	1656	1696
70°	1584	1454	1519
75°	1295	1185	1226
80°	928	831	868
85°	508	435	448

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2039 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.3	3.4
10°-20°	424.5	9.7
20°-30°	645.9	14.8
30°-40°	783.2	17.9
40°-50°	814.3	18.7
50°-60°	727.8	16.7
60°-70°	524.7	12.0
70°-80°	252.8	5.8
80°-90°	43.3	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°	1217.7	27.9
0°-40°	2000.9	45.9
0°-60°	3543.0	81.2
0°-90°	4363.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4363.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1553	1553	1553	1553	1553	
5°	1559	1545	1541	1548	1545	149
15°	1511	1500	1506	1497	1499	428
25°	1421	1399	1405	1398	1399	653
35°	1262	1248	1259	1251	1250	791
45°	1072	1057	1049	1054	1058	827
55°	830	818	811	808	820	744
65°	551	537	520	524	533	545
75°	249	242	228	230	236	268
85°	33	30	28	29	29	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1553.2	1553.2	1553.2	1553.2	1553.2
2.5°	1571.3	1558.7	1539.1	1548.5	1559.5
5°	1558.7	1545.4	1540.7	1548.5	1545.4
7.5°	1561.1	1540.7	1534.4	1543.1	1533.7
10°	1550.1	1532.1	1529.0	1532.9	1532.1
12.5°	1526.6	1522.7	1520.3	1514.1	1541.5
15°	1510.9	1500.0	1506.2	1496.8	1499.2
17.5°	1500.8	1474.9	1482.7	1481.2	1491.4
20°	1467.1	1460.8	1459.2	1454.5	1456.9
22.5°	1448.3	1433.4	1428.7	1427.1	1428.7
25°	1420.9	1398.9	1405.2	1398.1	1398.9
27.5°	1381.7	1357.4	1365.2	1364.5	1375.4
30°	1344.9	1326.9	1332.4	1327.7	1341.0
32.5°	1303.4	1287.7	1290.1	1289.3	1290.8
35°	1261.9	1247.8	1258.7	1250.9	1250.1
37.5°	1228.2	1200.0	1214.9	1206.2	1215.6
40°	1170.2	1159.2	1157.7	1152.2	1156.1
42.5°	1122.4	1108.3	1106.0	1109.1	1109.1
45°	1071.5	1057.4	1048.8	1053.5	1058.2
47.5°	1022.2	1004.2	993.2	995.5	1004.9
50°	963.4	939.9	936.0	939.1	946.2
52.5°	900.0	881.2	875.7	874.9	878.1
55°	829.5	818.5	810.7	808.3	820.1
57.5°	766.0	749.6	740.2	744.1	755.1
60°	697.1	679.1	670.5	673.6	685.4
62.5°	625.1	607.0	593.7	600.0	613.3
65°	550.6	537.3	520.1	524.0	532.6
67.5°	478.6	463.7	445.7	448.0	457.4
70°	402.6	386.9	369.7	373.6	386.2
72.5°	322.7	312.5	296.9	298.4	309.4
75°	249.1	242.0	227.9	230.3	235.8
77.5°	184.9	175.5	164.5	166.8	173.9
80°	119.8	116.7	107.3	108.9	112.0
82.5°	68.1	68.1	64.2	62.7	66.6
85°	32.9	30.5	28.2	29.0	29.0
87.5°	7.8	8.6	7.8	7.0	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)