

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: P688105

Luminaire Tested: FLR-HA-14-40-40-CP250

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688105
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-14-40-40-CP250
Description: Fail-Safe - FLR Fully Luminous Recessed 1X4 4000K Luminaire for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

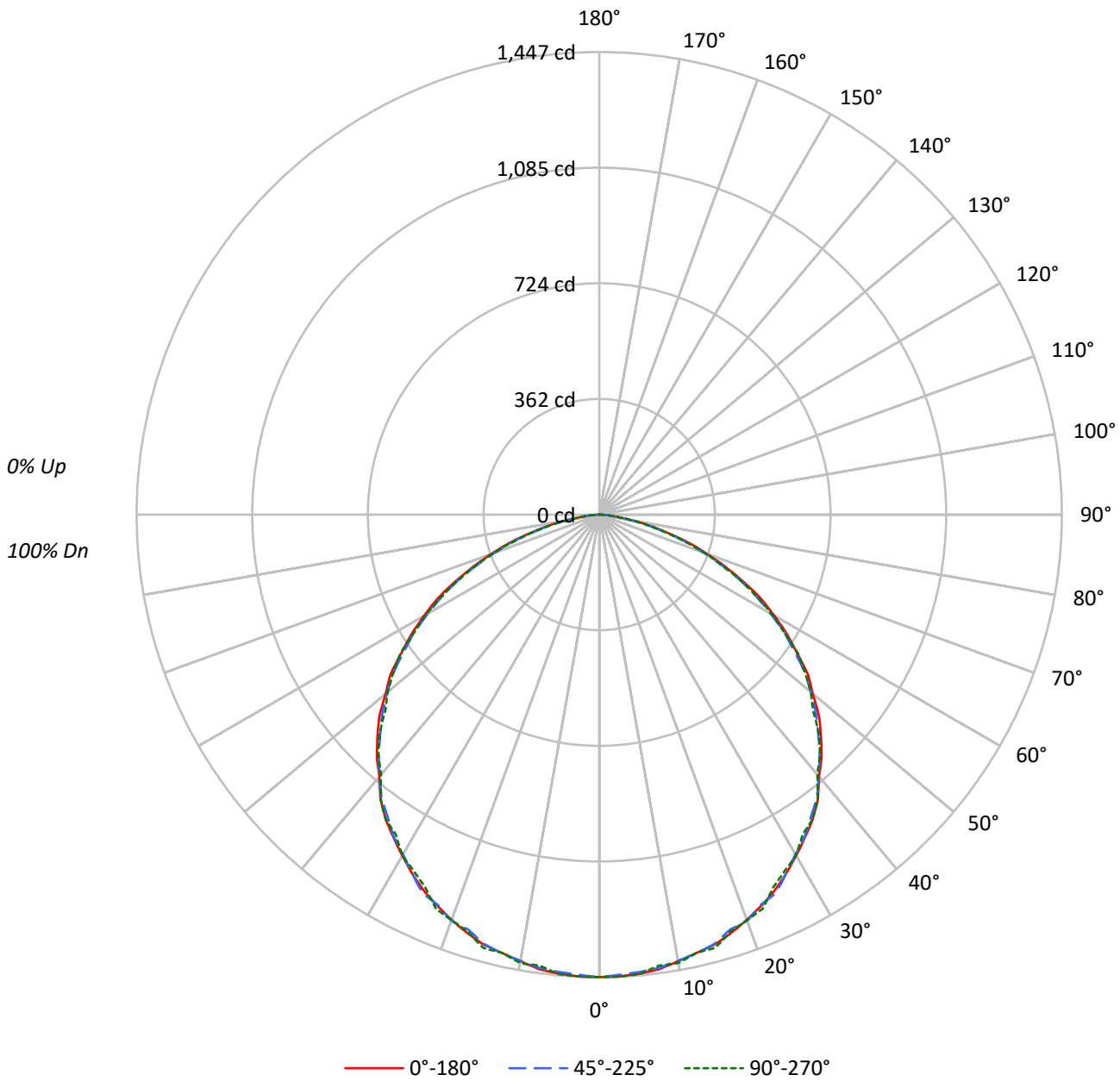
Lumens per Lamp: N/A
Luminaire Lumens: 4011.1 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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	92	85	79	97	90	84	78	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	53	51
5	76	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
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°	3894	3894	3894
5°	3894	3880	3899
10°	3877	3872	3893
15°	3882	3875	3909
20°	3865	3873	3867
25°	3854	3881	3822
30°	3828	3813	3825
35°	3824	3792	3824
40°	3757	3755	3727
45°	3731	3684	3702
50°	3647	3618	3615
55°	3543	3492	3564
60°	3398	3323	3360
65°	3168	3099	3104
70°	2807	2729	2758
75°	2310	2223	2254
80°	1621	1585	1609
85°	831	784	784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3731 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	3.4
10°-20°	392.5	9.8
20°-30°	596.8	14.9
30°-40°	721.8	18.0
40°-50°	747.9	18.6
50°-60°	667.7	16.6
60°-70°	479.5	12.0
70°-80°	229.9	5.7
80°-90°	38.2	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°	1126.1	28.1
0°-40°	1847.9	46.1
0°-60°	3263.5	81.4
0°-90°	4011.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4011.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1447	1447	1447	1447	1447	
5°	1442	1446	1436	1437	1443	137
15°	1393	1395	1391	1391	1403	393
25°	1298	1295	1307	1291	1287	598
35°	1164	1155	1154	1150	1164	726
45°	980	974	968	967	973	756
55°	755	747	744	743	760	677
65°	498	483	487	480	488	492
75°	222	208	214	214	217	240
85°	27	25	25	25	25	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1447.1	1447.1	1447.1	1447.1	1447.1
2.5°	1446.4	1447.9	1441.0	1439.4	1446.4
5°	1441.7	1446.4	1436.4	1437.1	1443.3
7.5°	1434.8	1431.7	1430.2	1435.6	1423.3
10°	1418.7	1425.6	1417.1	1413.3	1424.8
12.5°	1404.8	1405.6	1406.4	1407.9	1404.1
15°	1393.3	1394.8	1391.0	1391.0	1403.3
17.5°	1372.5	1375.6	1361.0	1370.2	1367.2
20°	1349.5	1346.4	1352.5	1350.2	1350.2
22.5°	1324.1	1324.1	1321.0	1322.6	1334.9
25°	1298.0	1294.9	1307.2	1291.0	1287.2
27.5°	1266.4	1263.4	1266.4	1258.0	1256.4
30°	1231.8	1224.1	1227.2	1228.0	1231.1
32.5°	1198.0	1190.3	1195.7	1190.3	1184.9
35°	1164.2	1154.9	1154.2	1149.6	1164.2
37.5°	1123.4	1113.4	1117.3	1102.6	1122.6
40°	1069.6	1063.4	1068.8	1064.2	1061.1
42.5°	1029.6	1022.7	1020.4	1017.3	1021.9
45°	980.4	973.5	968.1	967.3	972.7
47.5°	932.7	915.0	919.6	912.7	906.6
50°	871.2	866.6	864.3	857.4	863.5
52.5°	823.5	806.6	810.5	804.3	811.2
55°	755.1	746.6	744.3	742.8	759.7
57.5°	695.9	685.1	686.7	682.8	685.1
60°	631.3	621.3	617.5	616.7	624.4
62.5°	570.5	549.8	552.9	552.1	555.9
65°	497.5	482.9	486.7	479.8	487.5
67.5°	427.5	412.9	414.5	412.9	416.8
70°	356.8	340.6	346.8	343.7	350.6
72.5°	295.3	276.0	281.4	276.0	282.2
75°	222.2	207.6	213.8	213.8	216.8
77.5°	163.8	150.7	155.3	153.8	156.9
80°	104.6	99.2	102.3	100.0	103.8
82.5°	60.0	56.1	56.1	57.7	58.4
85°	26.9	25.4	25.4	25.4	25.4
87.5°	6.9	6.9	6.9	6.9	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)