

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: P687840

Luminaire Tested: FLR-HA-22-L3C3 (HI)-35-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687840
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-22-L3C3 (HI)-35-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at High Lumen setting for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

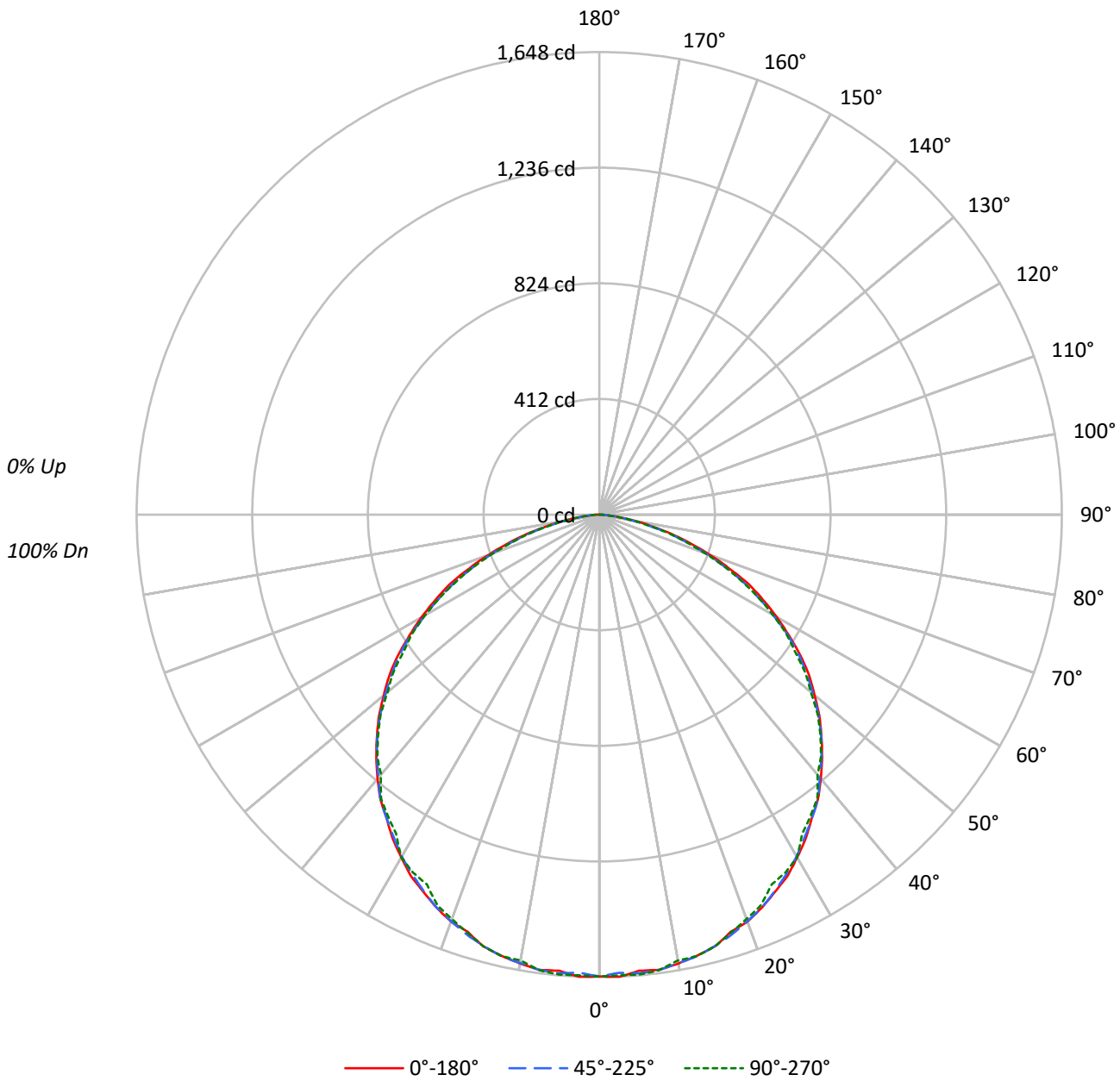
Lumens per Lamp: N/A
Luminaire Lumens: 4622.7 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
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°	4429	4429	4429
5°	4407	4430	4443
10°	4438	4433	4408
15°	4439	4434	4437
20°	4420	4416	4392
25°	4403	4393	4317
30°	4383	4370	4381
35°	4337	4339	4309
40°	4316	4296	4249
45°	4262	4255	4239
50°	4194	4163	4118
55°	4108	4069	3991
60°	3930	3845	3845
65°	3750	3597	3560
70°	3301	3170	3131
75°	2755	2617	2643
80°	1970	1853	1841
85°	1025	948	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 4271 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.0	3.4
10°-20°	448.4	9.7
20°-30°	682.3	14.8
30°-40°	826.6	17.9
40°-50°	860.8	18.6
50°-60°	770.7	16.7
60°-70°	559.5	12.1
70°-80°	271.7	5.9
80°-90°	46.8	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°	1286.7	27.8
0°-40°	2113.3	45.7
0°-60°	3744.7	81.0
0°-90°	4622.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4622.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1646	1646	1646	1646	1646	
5°	1632	1642	1640	1637	1645	156
15°	1593	1590	1592	1580	1593	448
25°	1483	1486	1480	1477	1454	684
35°	1320	1328	1321	1325	1312	828
45°	1120	1122	1118	1112	1114	864
55°	876	869	867	857	851	779
65°	589	573	565	563	559	574
75°	265	259	252	252	254	282
85°	33	34	31	31	32	49
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1645.7	1645.7	1645.7	1645.7	1645.7
2.5°	1648.2	1647.4	1634.1	1639.9	1643.2
5°	1631.6	1641.6	1639.9	1636.6	1644.9
7.5°	1635.8	1631.6	1636.6	1635.8	1637.4
10°	1624.1	1620.0	1622.5	1623.3	1613.3
12.5°	1610.0	1607.5	1611.7	1615.0	1610.8
15°	1593.4	1590.1	1591.7	1580.1	1592.6
17.5°	1558.5	1566.8	1569.3	1562.7	1561.8
20°	1543.5	1541.1	1541.9	1539.4	1533.6
22.5°	1515.3	1525.3	1515.3	1510.3	1506.2
25°	1482.9	1486.2	1479.6	1477.1	1453.8
27.5°	1452.2	1451.3	1443.9	1443.9	1437.2
30°	1410.6	1404.8	1406.5	1399.8	1409.8
32.5°	1369.1	1369.9	1362.4	1364.9	1346.7
35°	1320.1	1327.5	1320.9	1325.1	1311.8
37.5°	1280.2	1275.2	1280.2	1273.5	1276.0
40°	1228.7	1227.0	1222.9	1224.5	1209.6
42.5°	1175.5	1173.0	1172.2	1168.9	1169.7
45°	1119.9	1122.4	1118.2	1112.4	1114.0
47.5°	1064.2	1066.7	1059.2	1051.7	1056.7
50°	1001.9	1003.6	994.4	991.9	983.6
52.5°	942.9	935.4	930.4	926.3	925.5
55°	875.6	869.0	867.3	857.3	850.7
57.5°	800.8	799.2	794.2	786.7	790.0
60°	730.2	723.6	714.4	712.8	714.4
62.5°	658.0	650.5	638.9	642.2	638.9
65°	589.0	573.2	564.9	563.3	559.1
67.5°	500.9	489.3	482.7	480.2	481.8
70°	419.5	418.7	402.9	400.4	397.9
72.5°	340.6	334.0	324.8	324.0	323.2
75°	265.0	259.2	251.7	252.5	254.2
77.5°	191.1	185.3	178.6	181.1	177.8
80°	127.1	125.4	119.6	118.8	118.8
82.5°	75.6	72.3	69.0	69.0	69.8
85°	33.2	34.1	30.7	30.7	32.4
87.5°	8.3	9.1	8.3	8.3	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)