

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: P687846

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

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687846
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 (MED)-35-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at Midium Lumen setting for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

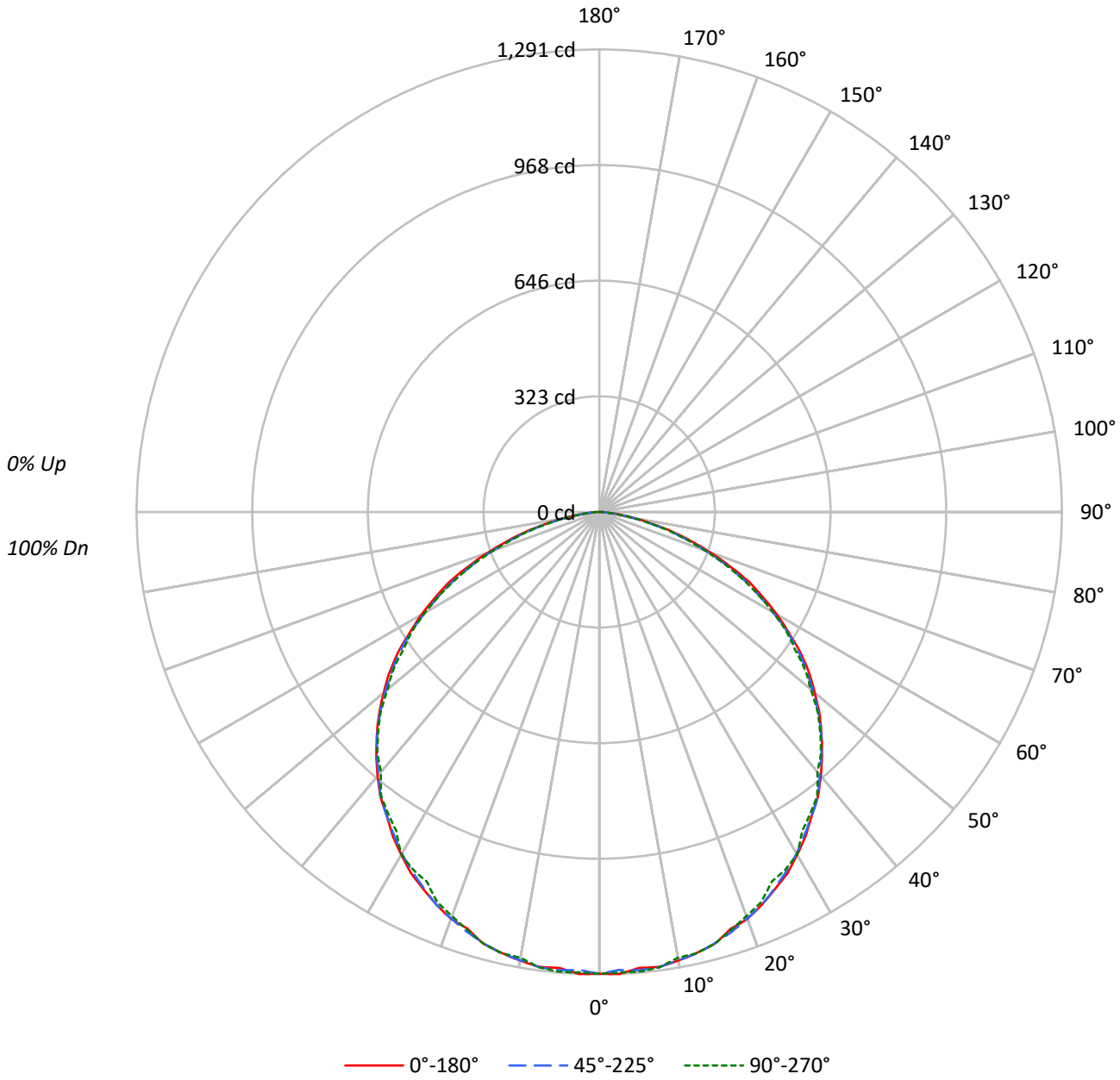
Lumens per Lamp: N/A
Luminaire Lumens: 3620.5 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 30.2
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°	3468	3468	3468
5°	3452	3469	3480
10°	3476	3472	3453
15°	3477	3473	3475
20°	3462	3458	3440
25°	3448	3441	3381
30°	3433	3423	3431
35°	3396	3398	3375
40°	3380	3364	3328
45°	3338	3333	3320
50°	3285	3260	3225
55°	3217	3187	3126
60°	3078	3012	3012
65°	2937	2817	2788
70°	2585	2483	2452
75°	2158	2049	2070
80°	1542	1452	1441
85°	803	744	784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 3345 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.4
10°-20°	351.2	9.7
20°-30°	534.3	14.8
30°-40°	647.4	17.9
40°-50°	674.2	18.6
50°-60°	603.6	16.7
60°-70°	438.2	12.1
70°-80°	212.8	5.9
80°-90°	36.7	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°	1007.7	27.8
0°-40°	1655.1	45.7
0°-60°	2932.9	81.0
0°-90°	3620.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3620.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1289	1289	1289	1289	1289	
5°	1278	1286	1284	1282	1288	122
15°	1248	1245	1247	1238	1247	351
25°	1161	1164	1159	1157	1139	536
35°	1034	1040	1034	1038	1027	649
45°	877	879	876	871	872	677
55°	686	681	679	672	666	610
65°	461	449	442	441	438	450
75°	208	203	197	198	199	221
85°	26	27	24	24	25	38
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.9	1288.9	1288.9	1288.9	1288.9
2.5°	1290.9	1290.2	1279.8	1284.4	1287.0
5°	1277.9	1285.7	1284.4	1281.8	1288.3
7.5°	1281.1	1277.9	1281.8	1281.1	1282.4
10°	1272.0	1268.7	1270.7	1271.4	1263.5
12.5°	1260.9	1259.0	1262.2	1264.8	1261.6
15°	1247.9	1245.3	1246.6	1237.5	1247.3
17.5°	1220.6	1227.1	1229.1	1223.9	1223.2
20°	1208.9	1206.9	1207.6	1205.6	1201.1
22.5°	1186.8	1194.6	1186.8	1182.9	1179.6
25°	1161.4	1164.0	1158.8	1156.8	1138.6
27.5°	1137.3	1136.7	1130.8	1130.8	1125.6
30°	1104.8	1100.2	1101.5	1096.3	1104.1
32.5°	1072.3	1072.9	1067.1	1069.0	1054.7
35°	1033.9	1039.7	1034.5	1037.8	1027.4
37.5°	1002.6	998.7	1002.6	997.4	999.4
40°	962.3	961.0	957.7	959.0	947.3
42.5°	920.7	918.7	918.1	915.5	916.1
45°	877.1	879.0	875.8	871.2	872.5
47.5°	833.5	835.4	829.6	823.7	827.6
50°	784.7	786.0	778.8	776.9	770.4
52.5°	738.5	732.6	728.7	725.5	724.8
55°	685.8	680.6	679.3	671.5	666.3
57.5°	627.2	625.9	622.0	616.2	618.8
60°	571.9	566.7	559.6	558.2	559.6
62.5°	515.3	509.5	500.3	502.9	500.3
65°	461.3	448.9	442.4	441.1	437.9
67.5°	392.3	383.2	378.0	376.1	377.4
70°	328.6	327.9	315.6	313.6	311.7
72.5°	266.8	261.6	254.4	253.7	253.1
75°	207.6	203.0	197.1	197.8	199.1
77.5°	149.6	145.1	139.9	141.8	139.2
80°	99.5	98.2	93.7	93.0	93.0
82.5°	59.2	56.6	54.0	54.0	54.7
85°	26.0	26.7	24.1	24.1	25.4
87.5°	6.5	7.2	6.5	6.5	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)