

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: P687837

Luminaire Tested: FLR-HA-22-35-35-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687837
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-22-35-35-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

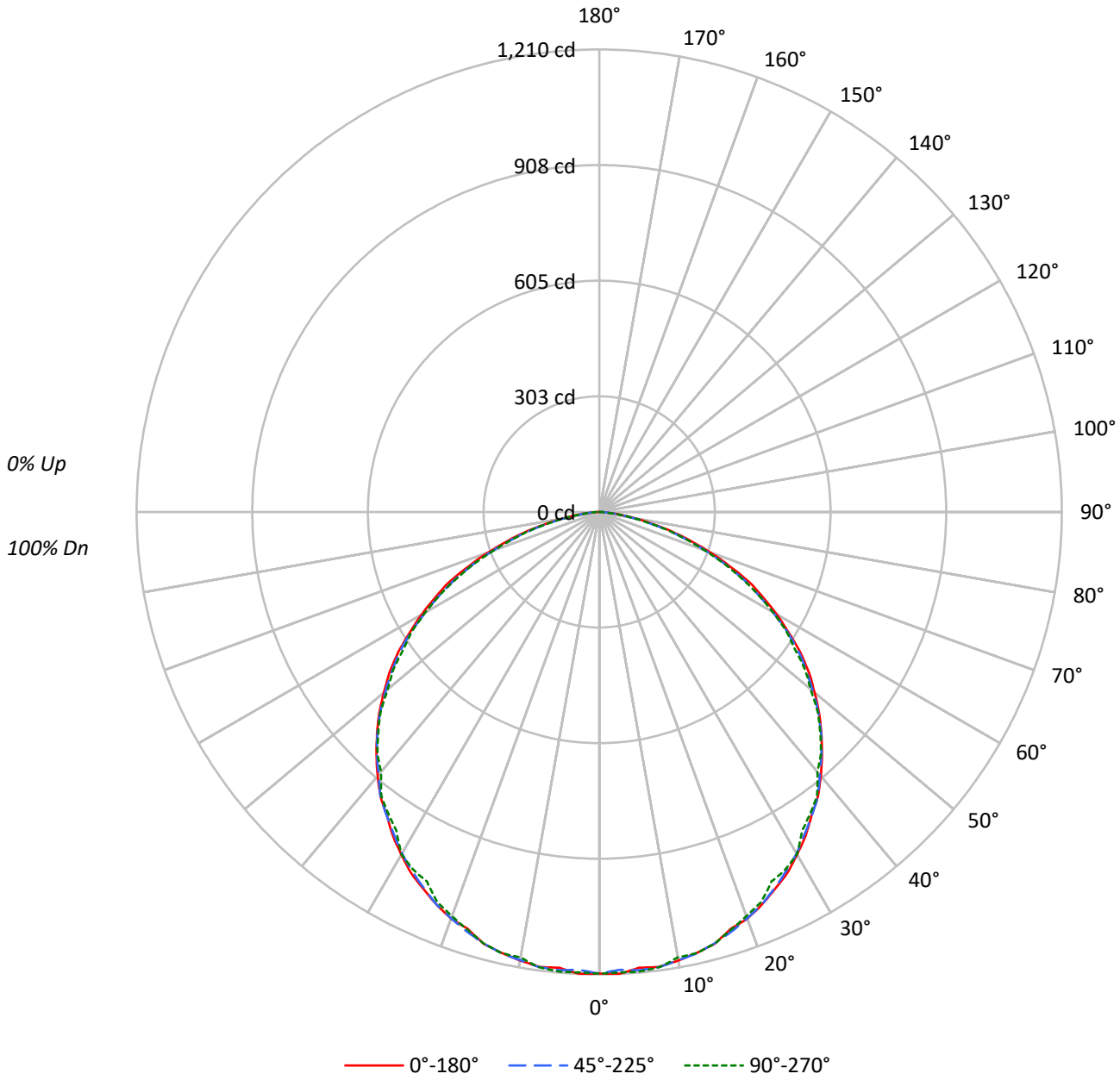
Lumens per Lamp: N/A
Luminaire Lumens: 3392.3 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 31.4
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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85	85	85	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71	71	71	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60	60	60	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51	51	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44	44	44	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39	39	39	39
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34	34	34	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30	30	30	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27	27	27	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	27	37	31	26	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3250	3250	3250
5°	3234	3251	3261
10°	3257	3253	3235
15°	3258	3254	3256
20°	3244	3240	3223
25°	3231	3224	3168
30°	3217	3207	3214
35°	3182	3184	3162
40°	3167	3152	3118
45°	3127	3123	3111
50°	3078	3055	3022
55°	3015	2986	2929
60°	2884	2822	2822
65°	2752	2640	2613
70°	2423	2327	2297
75°	2022	1920	1939
80°	1446	1361	1351
85°	753	698	735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 3134 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.5	3.4
10°-20°	329.1	9.7
20°-30°	500.7	14.8
30°-40°	606.6	17.9
40°-50°	631.7	18.6
50°-60°	565.5	16.7
60°-70°	410.6	12.1
70°-80°	199.4	5.9
80°-90°	34.3	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°	944.2	27.8
0°-40°	1550.8	45.7
0°-60°	2748.0	81.0
0°-90°	3392.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3392.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1208	1208	1208	1208	1208	
5°	1197	1205	1203	1201	1207	114
15°	1169	1167	1168	1160	1169	329
25°	1088	1091	1086	1084	1067	502
35°	969	974	969	972	963	608
45°	822	824	821	816	818	634
55°	643	638	636	629	624	572
65°	432	421	415	413	410	422
75°	194	190	185	185	186	207
85°	24	25	23	23	24	36
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1207.7	1207.7	1207.7	1207.7	1207.7
2.5°	1209.5	1208.9	1199.1	1203.4	1205.9
5°	1197.3	1204.6	1203.4	1201.0	1207.1
7.5°	1200.4	1197.3	1201.0	1200.4	1201.6
10°	1191.8	1188.8	1190.6	1191.2	1183.9
12.5°	1181.5	1179.6	1182.7	1185.1	1182.1
15°	1169.3	1166.8	1168.1	1159.5	1168.7
17.5°	1143.7	1149.8	1151.6	1146.7	1146.1
20°	1132.7	1130.9	1131.5	1129.7	1125.4
22.5°	1112.0	1119.3	1112.0	1108.3	1105.3
25°	1088.2	1090.6	1085.8	1083.9	1066.9
27.5°	1065.6	1065.0	1059.5	1059.5	1054.7
30°	1035.2	1030.9	1032.1	1027.2	1034.5
32.5°	1004.7	1005.3	999.8	1001.6	988.2
35°	968.7	974.2	969.3	972.4	962.6
37.5°	939.4	935.8	939.4	934.6	936.4
40°	901.6	900.4	897.4	898.6	887.6
42.5°	862.6	860.8	860.2	857.8	858.4
45°	821.8	823.6	820.6	816.3	817.5
47.5°	780.9	782.8	777.3	771.8	775.5
50°	735.2	736.4	729.7	727.9	721.8
52.5°	691.9	686.4	682.8	679.7	679.1
55°	642.6	637.7	636.5	629.1	624.3
57.5°	587.7	586.5	582.8	577.3	579.8
60°	535.9	531.0	524.3	523.1	524.3
62.5°	482.8	477.3	468.8	471.2	468.8
65°	432.2	420.6	414.6	413.3	410.3
67.5°	367.6	359.1	354.2	352.4	353.6
70°	307.9	307.3	295.7	293.8	292.0
72.5°	249.9	245.1	238.4	237.8	237.1
75°	194.5	190.2	184.7	185.3	186.5
77.5°	140.2	135.9	131.1	132.9	130.5
80°	93.3	92.1	87.8	87.2	87.2
82.5°	55.5	53.0	50.6	50.6	51.2
85°	24.4	25.0	22.6	22.6	23.8
87.5°	6.1	6.7	6.1	6.1	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)