

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: P687835

Luminaire Tested: FLR-HA-14-40-40-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687835
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-14-40-40-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 1X4 4000K Luminaire for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

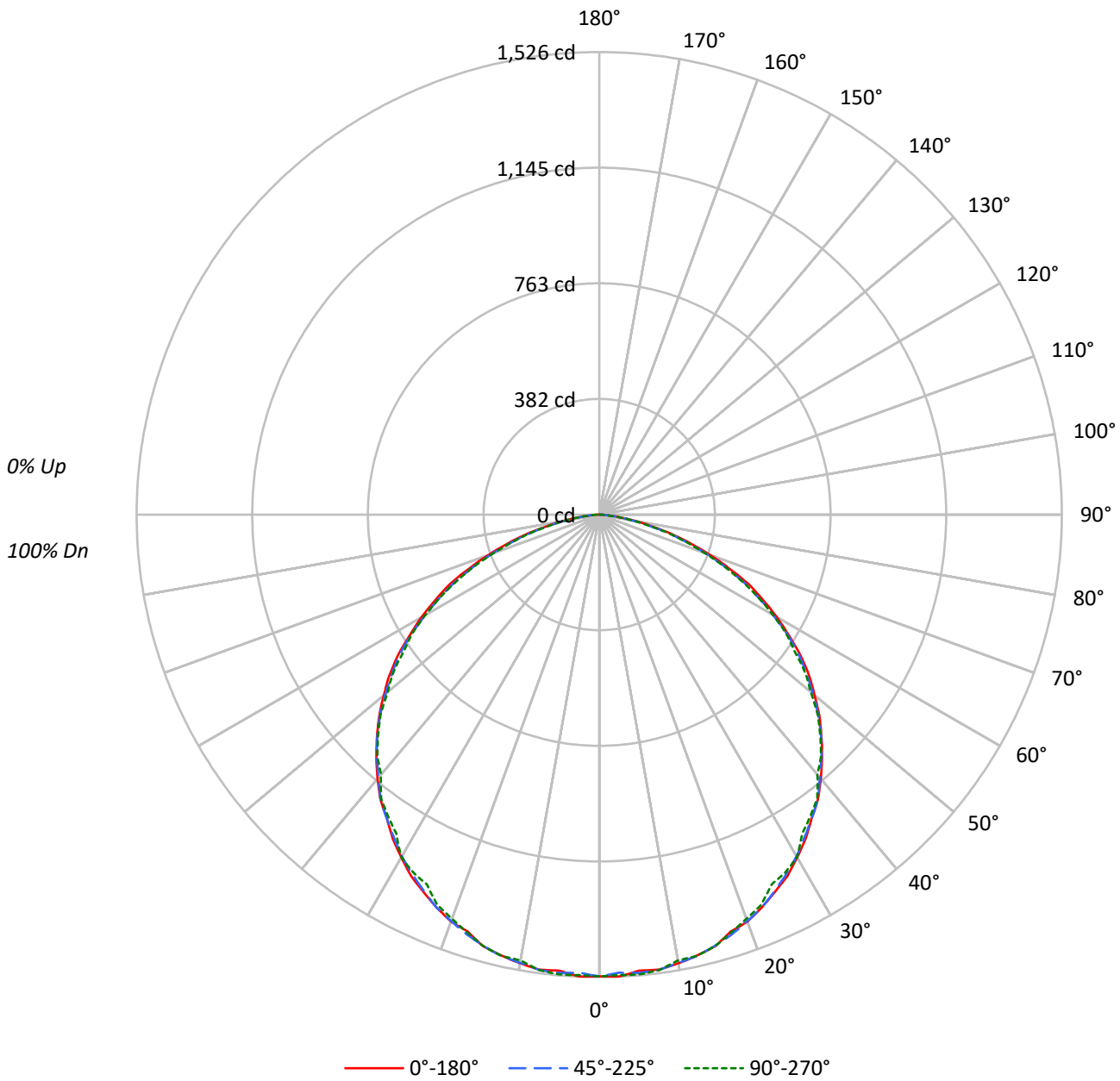
Lumens per Lamp: N/A
Luminaire Lumens: 4279.5 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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	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°	4100	4100	4100
5°	4080	4101	4113
10°	4108	4104	4081
15°	4109	4105	4107
20°	4092	4088	4066
25°	4076	4067	3996
30°	4058	4046	4055
35°	4014	4017	3989
40°	3996	3977	3934
45°	3945	3940	3925
50°	3883	3854	3812
55°	3803	3767	3695
60°	3638	3560	3560
65°	3472	3330	3296
70°	3056	2935	2899
75°	2550	2423	2446
80°	1824	1715	1705
85°	951	880	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 3954 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.4	3.4
10°-20°	415.1	9.7
20°-30°	631.6	14.8
30°-40°	765.2	17.9
40°-50°	796.9	18.6
50°-60°	713.5	16.7
60°-70°	518.0	12.1
70°-80°	251.5	5.9
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°	1191.1	27.8
0°-40°	1956.4	45.7
0°-60°	3466.7	81.0
0°-90°	4279.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4279.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1510	1520	1518	1515	1523	144
15°	1475	1472	1474	1463	1474	415
25°	1373	1376	1370	1367	1346	633
35°	1222	1229	1223	1227	1214	767
45°	1037	1039	1035	1030	1031	800
55°	811	804	803	794	788	722
65°	545	531	523	521	518	532
75°	245	240	233	234	235	261
85°	31	32	28	28	30	45
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1523.5	1523.5	1523.5	1523.5	1523.5
2.5°	1525.8	1525.1	1512.8	1518.1	1521.2
5°	1510.4	1519.7	1518.1	1515.1	1522.8
7.5°	1514.3	1510.4	1515.1	1514.3	1515.8
10°	1503.5	1499.7	1502.0	1502.8	1493.5
12.5°	1490.5	1488.1	1492.0	1495.1	1491.2
15°	1475.1	1472.0	1473.5	1462.8	1474.3
17.5°	1442.8	1450.5	1452.8	1446.6	1445.8
20°	1428.9	1426.6	1427.4	1425.1	1419.7
22.5°	1402.8	1412.0	1402.8	1398.2	1394.3
25°	1372.8	1375.9	1369.7	1367.4	1345.9
27.5°	1344.3	1343.6	1336.6	1336.6	1330.5
30°	1305.9	1300.5	1302.0	1295.9	1305.1
32.5°	1267.4	1268.2	1261.3	1263.6	1246.7
35°	1222.0	1229.0	1222.8	1226.7	1214.4
37.5°	1185.1	1180.5	1185.1	1179.0	1181.3
40°	1137.5	1135.9	1132.1	1133.6	1119.8
42.5°	1088.2	1085.9	1085.2	1082.1	1082.8
45°	1036.7	1039.0	1035.2	1029.8	1031.3
47.5°	985.2	987.5	980.6	973.6	978.3
50°	927.5	929.0	920.6	918.3	910.6
52.5°	872.9	866.0	861.4	857.5	856.7
55°	810.6	804.4	802.9	793.7	787.5
57.5°	741.4	739.8	735.2	728.3	731.4
60°	676.0	669.9	661.4	659.9	661.4
62.5°	609.1	602.2	591.4	594.5	591.4
65°	545.3	530.7	523.0	521.4	517.6
67.5°	463.7	453.0	446.8	444.5	446.1
70°	388.4	387.6	373.0	370.7	368.4
72.5°	315.3	309.2	300.7	299.9	299.2
75°	245.3	239.9	233.0	233.8	235.3
77.5°	176.9	171.5	165.3	167.7	164.6
80°	117.7	116.1	110.7	110.0	110.0
82.5°	70.0	66.9	63.8	63.8	64.6
85°	30.8	31.5	28.5	28.5	30.0
87.5°	7.7	8.5	7.7	7.7	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)