

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: P973904

Luminaire Tested: FLR2-22-45HE-L840-CP187

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973904
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-2)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR2-22-45HE-L840-CP187
Description: SHAPER SENSE CIRCLE

Light Source:
Ballast/Driver: -

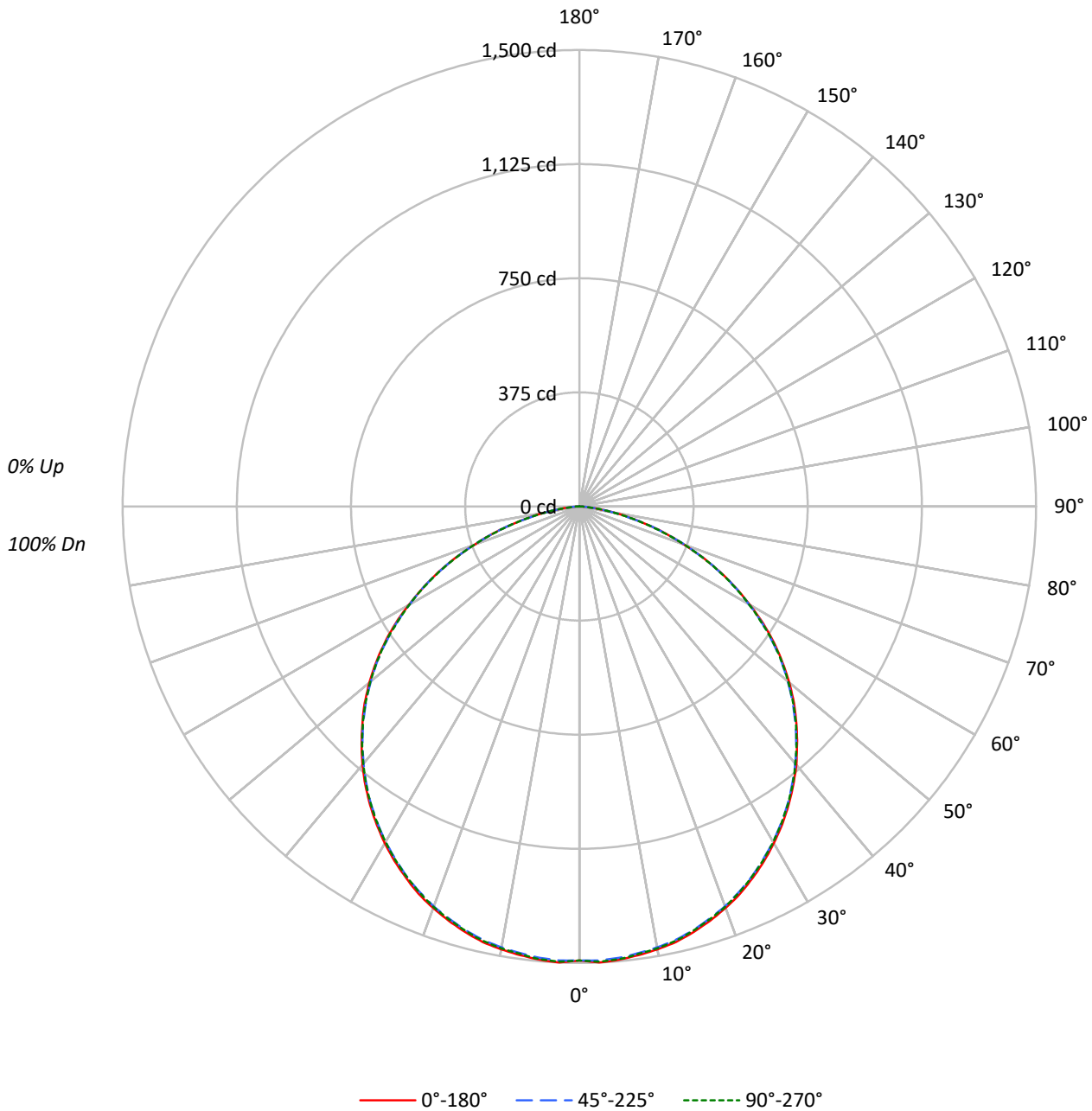
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4171.8 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 36.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor:
Total Harmonic Distortion (THDi):
Frequency (hertz): 60
Stabilization Time: HR
Operation Time: HR
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										
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	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															
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85					85															
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71															
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60					60															
4	83	71	63	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51					51															
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44					44															
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39					39															
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34															
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	43	37	32	30					30															
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27					27															
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25					25															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4014	4014	4014
5°	4040	4022	4035
10°	4039	4021	4029
15°	4035	4017	4023
20°	4021	4005	4011
25°	4000	3983	3986
30°	3971	3954	3957
35°	3935	3920	3923
40°	3894	3874	3878
45°	3836	3819	3826
50°	3769	3742	3749
55°	3661	3631	3644
60°	3481	3467	3467
65°	3251	3244	3233
70°	2878	2892	2885
75°	2424	2405	2385
80°	1742	1714	1698
85°	911	911	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	3.4
10°-20°	406.2	9.7
20°-30°	617.3	14.8
30°-40°	746.2	17.9
40°-50°	774.5	18.6
50°-60°	692.4	16.6
60°-70°	503.4	12.1
70°-80°	247.6	5.9
80°-90°	42.9	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°	1164.8	27.9
0°-40°	1911.0	45.8
0°-60°	3377.9	81.0
0°-90°	4171.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4171.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1492	1492	1492	1492	1492	
5°	1496	1478	1489	1484	1494	142
15°	1448	1432	1442	1438	1444	409
25°	1347	1332	1342	1339	1342	621
35°	1198	1190	1193	1194	1194	749
45°	1008	1003	1003	1005	1005	778
55°	780	776	774	776	777	696
65°	510	512	510	510	508	503
75°	233	235	231	232	229	247
85°	30	30	30	30	29	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1491.8	1491.8	1491.8	1491.8	1491.8
2.5°	1500.1	1482.6	1493.6	1487.2	1497.3
5°	1495.5	1478.0	1489.0	1483.5	1493.6
7.5°	1487.2	1469.7	1480.7	1475.2	1483.5
10°	1478.0	1459.5	1471.5	1466.0	1474.3
12.5°	1466.0	1448.5	1459.5	1454.9	1462.3
15°	1448.5	1431.9	1442.0	1438.3	1443.9
17.5°	1427.3	1410.7	1420.8	1418.1	1422.7
20°	1404.3	1388.6	1398.7	1396.0	1400.6
22.5°	1378.5	1361.9	1371.1	1369.2	1372.9
25°	1347.1	1332.4	1341.6	1338.8	1342.5
27.5°	1314.0	1300.1	1307.5	1307.5	1309.3
30°	1278.0	1265.1	1272.5	1272.5	1273.4
32.5°	1239.3	1229.2	1233.8	1234.7	1234.7
35°	1197.9	1189.6	1193.2	1194.2	1194.2
37.5°	1154.5	1146.3	1149.0	1150.9	1150.9
40°	1108.5	1101.1	1102.9	1104.8	1103.9
42.5°	1058.7	1053.2	1054.1	1056.0	1056.0
45°	1008.0	1003.4	1003.4	1005.3	1005.3
47.5°	956.4	951.8	950.0	951.8	951.8
50°	900.2	895.6	893.8	895.6	895.6
52.5°	841.3	836.7	836.7	836.7	837.6
55°	780.4	775.8	774.0	775.8	776.8
57.5°	715.9	714.1	711.3	712.3	709.5
60°	646.8	646.8	644.1	645.9	644.1
62.5°	579.6	581.4	578.7	578.7	576.8
65°	510.5	512.3	509.5	509.5	507.7
67.5°	439.5	442.3	438.6	438.6	436.8
70°	365.8	371.3	367.6	368.6	366.7
72.5°	299.5	302.2	298.5	298.5	296.7
75°	233.1	235.0	231.3	232.2	229.4
77.5°	167.7	170.5	166.8	167.7	166.8
80°	112.4	113.3	110.6	111.5	109.6
82.5°	65.4	66.3	65.4	64.5	63.6
85°	29.5	30.4	29.5	29.5	28.6
87.5°	7.4	7.4	7.4	7.4	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)