

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: P973964

Luminaire Tested: FLR2-22-45HE-L940-CA080

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973964
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-L940-CA080
Description: SHAPER SENSE CIRCLE

Light Source:
Ballast/Driver: -

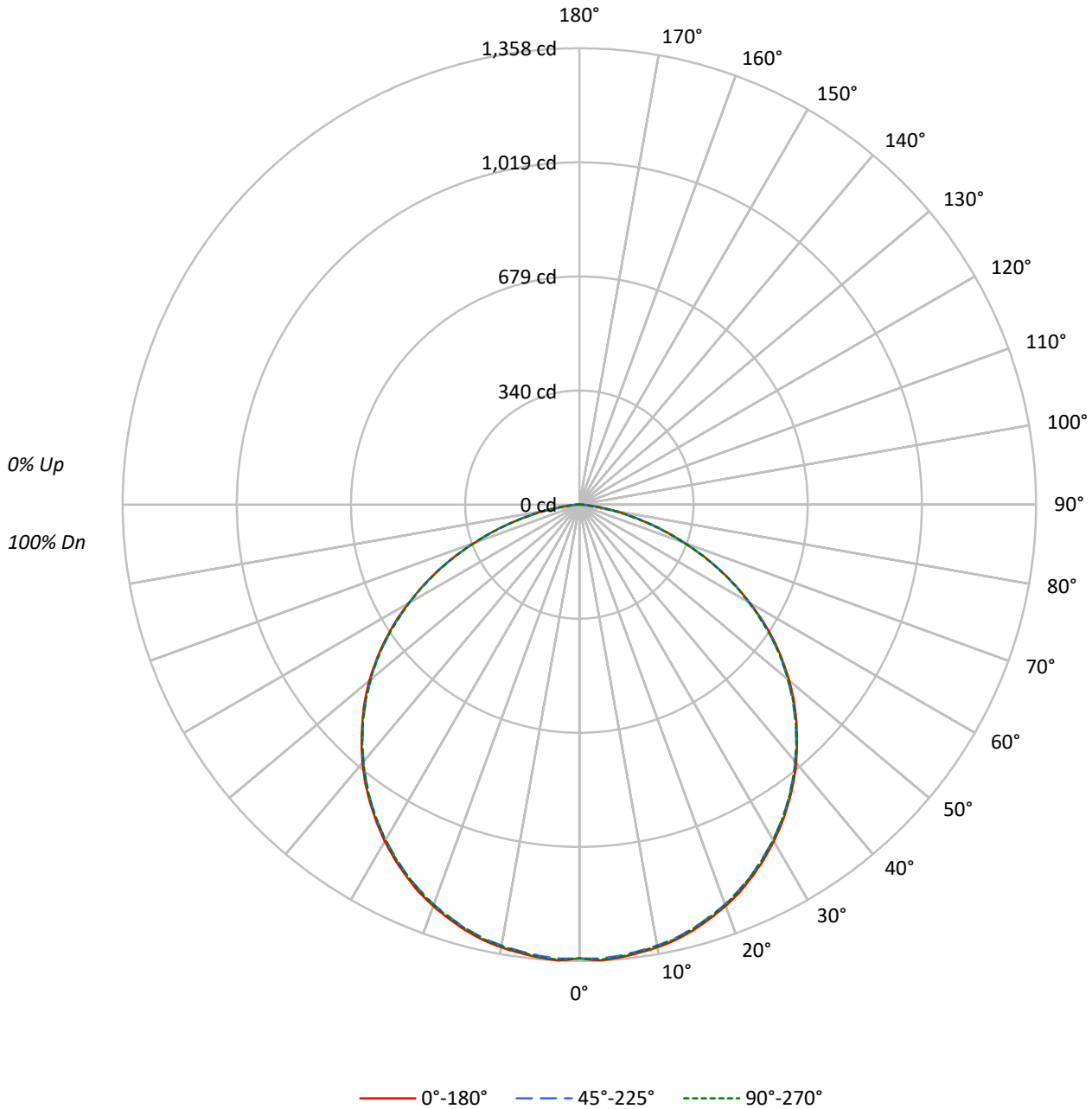
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3776.2 lumens
Efficiency: N/A
Efficacy: 104.3 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°	3634	3634	3634
5°	3657	3641	3652
10°	3656	3640	3647
15°	3653	3636	3641
20°	3640	3626	3630
25°	3621	3606	3608
30°	3594	3579	3581
35°	3562	3548	3551
40°	3525	3507	3510
45°	3472	3457	3463
50°	3412	3387	3394
55°	3314	3287	3299
60°	3151	3138	3138
65°	2942	2937	2926
70°	2605	2618	2611
75°	2194	2176	2159
80°	1578	1551	1539
85°	824	824	800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3472 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.9	3.4
10°-20°	367.7	9.7
20°-30°	558.8	14.8
30°-40°	675.4	17.9
40°-50°	701.0	18.6
50°-60°	626.8	16.6
60°-70°	455.7	12.1
70°-80°	224.1	5.9
80°-90°	38.9	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°	1054.4	27.9
0°-40°	1729.8	45.8
0°-60°	3057.6	81.0
0°-90°	3776.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3776.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1354	1338	1348	1343	1352	129
15°	1311	1296	1305	1302	1307	370
25°	1219	1206	1214	1212	1215	562
35°	1084	1077	1080	1081	1081	678
45°	912	908	908	910	910	704
55°	706	702	701	702	703	630
65°	462	464	461	461	460	456
75°	211	213	209	210	208	224
85°	27	28	27	27	26	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1350.3	1350.3	1350.3	1350.3	1350.3
2.5°	1357.8	1342.0	1352.0	1346.1	1355.3
5°	1353.7	1337.8	1347.8	1342.8	1352.0
7.5°	1346.1	1330.3	1340.3	1335.3	1342.8
10°	1337.8	1321.1	1332.0	1327.0	1334.5
12.5°	1327.0	1311.1	1321.1	1317.0	1323.6
15°	1311.1	1296.1	1305.3	1301.9	1306.9
17.5°	1291.9	1276.9	1286.1	1283.6	1287.8
20°	1271.1	1256.9	1266.1	1263.6	1267.7
22.5°	1247.7	1232.7	1241.1	1239.4	1242.7
25°	1219.4	1206.0	1214.4	1211.9	1215.2
27.5°	1189.3	1176.8	1183.5	1183.5	1185.2
30°	1156.8	1145.1	1151.8	1151.8	1152.6
32.5°	1121.8	1112.6	1116.8	1117.6	1117.6
35°	1084.3	1076.8	1080.1	1080.9	1080.9
37.5°	1045.1	1037.6	1040.1	1041.7	1041.7
40°	1003.4	996.7	998.4	1000.0	999.2
42.5°	958.3	953.3	954.1	955.8	955.8
45°	912.4	908.3	908.3	909.9	909.9
47.5°	865.7	861.6	859.9	861.6	861.6
50°	814.9	810.7	809.0	810.7	810.7
52.5°	761.5	757.3	757.3	757.3	758.1
55°	706.4	702.3	700.6	702.3	703.1
57.5°	648.1	646.4	643.9	644.7	642.2
60°	585.5	585.5	583.0	584.7	583.0
62.5°	524.6	526.3	523.8	523.8	522.1
65°	462.1	463.7	461.2	461.2	459.6
67.5°	397.8	400.3	397.0	397.0	395.3
70°	331.1	336.1	332.8	333.6	331.9
72.5°	271.1	273.6	270.2	270.2	268.6
75°	211.0	212.7	209.3	210.2	207.7
77.5°	151.8	154.3	151.0	151.8	151.0
80°	101.8	102.6	100.1	100.9	99.3
82.5°	59.2	60.1	59.2	58.4	57.5
85°	26.7	27.5	26.7	26.7	25.9
87.5°	6.7	6.7	6.7	6.7	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)