

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: P974844

Luminaire Tested: FLR2-24-90HE-L840-CP187

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P974844
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-3)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR2-24-90HE-L840-CP187
Description: SHAPER SENSE CIRCLE

Light Source:
Ballast/Driver: -

Summary

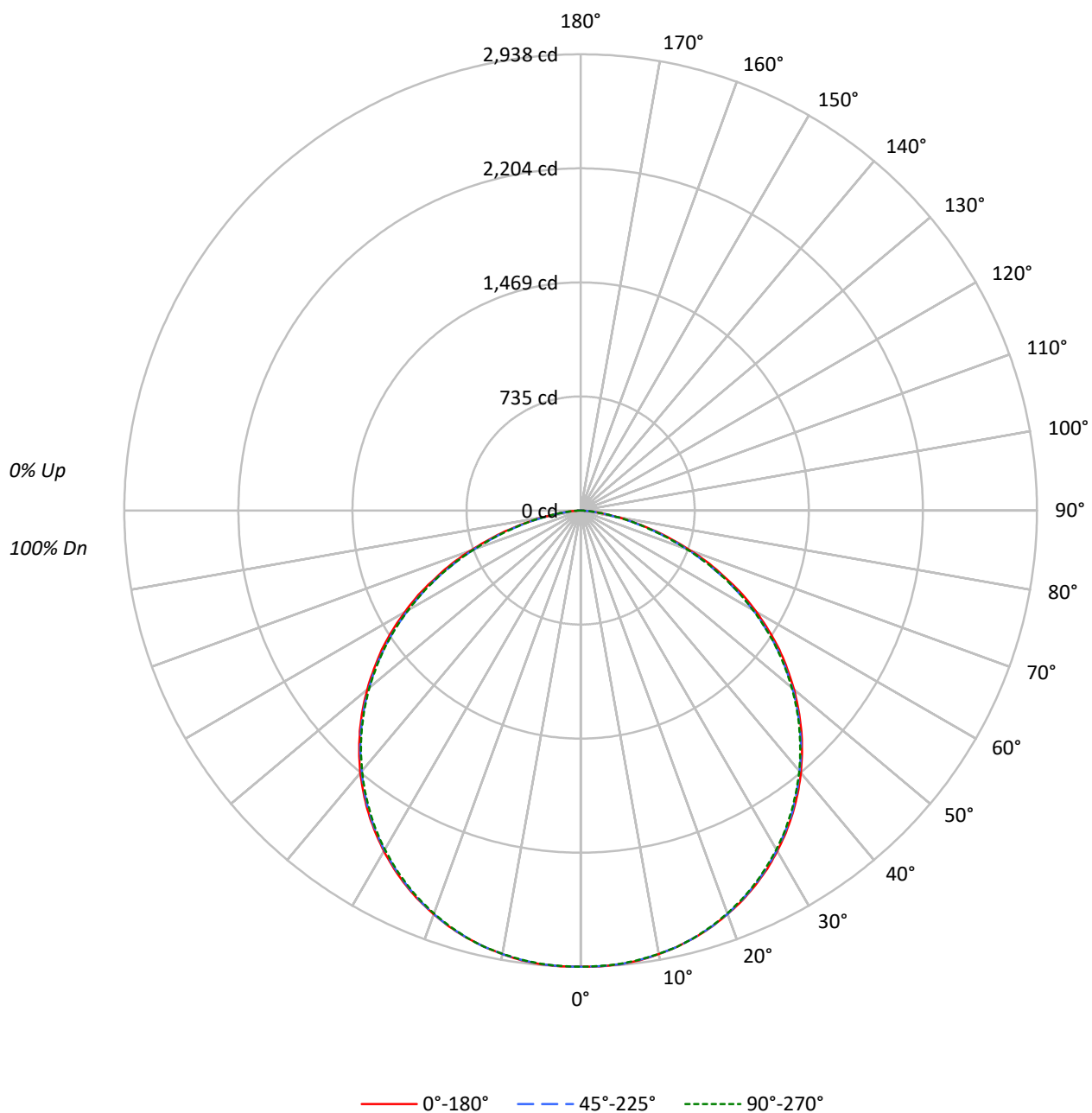
Lumens per Lamp: N/A
Luminaire Lumens: 8303.9 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.3
Input Voltage (V):
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

TEST NUMBER: P974844

CATALOG NUMBER: FLR2-24-90HE-L840-CP187

Luminous Intensity Polar Plot



TEST NUMBER: P974844

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	109	105	100	97	106	102	99	95	98	95	92		94	92	89		85
2	99	91	85	79	97	89	83	78	86	81	76		83	78	75		71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		60
4	83	71	62	56	81	70	62	55	67	60	55		65	59	54		51
5	76	64	55	48	74	62	54	48	60	53	47		58	52	47		44
6	70	57	48	42	69	56	48	42	54	47	41		53	46	41		38
7	65	52	43	37	64	51	43	37	49	42	37		48	41	36		34
8	61	47	39	33	59	47	38	33	45	38	33		44	37	32		30
9	57	43	35	30	55	43	35	30	42	34	29		41	34	29		27
10	53	40	32	27	52	39	32	27	38	31	27		38	31	26		25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3953	3953	3953
5°	3961	3961	3958
10°	3964	3962	3961
15°	3965	3963	3963
20°	3961	3959	3953
25°	3953	3946	3939
30°	3936	3924	3916
35°	3910	3900	3886
40°	3876	3851	3846
45°	3825	3803	3791
50°	3754	3725	3714
55°	3665	3613	3608
60°	3512	3450	3450
65°	3286	3209	3219
70°	2957	2866	2858
75°	2483	2384	2373
80°	1813	1723	1797
85°	1025	943	960

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3825 cd/sqm

TEST NUMBER: P974844

CATALOG NUMBER: FLR2-24-90HE-L840-CP187

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.9	3.4
10°-20°	803.4	9.7
20°-30°	1225.0	14.8
30°-40°	1484.1	17.9
40°-50°	1541.6	18.6
50°-60°	1379.1	16.6
60°-70°	1005.1	12.1
70°-80°	497.8	6.0
80°-90°	89.0	1.1
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°	2307.3	27.8
0°-40°	3791.4	45.7
0°-60°	6712.1	80.8
0°-90°	8303.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8303.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2938	2938	2938	2938	2938	
5°	2933	2934	2933	2933	2931	279
15°	2846	2845	2845	2847	2845	804
25°	2663	2660	2658	2657	2654	1227
35°	2380	2377	2374	2370	2366	1489
45°	2010	2006	1999	1995	1992	1549
55°	1562	1551	1540	1540	1538	1392
65°	1032	1024	1008	1012	1011	1023
75°	478	470	459	467	456	509
85°	66	61	61	62	62	92
90°	0	0	0	0	0	

TEST NUMBER: P974844

CATALOG NUMBER: FLR2-24-90HE-L840-CP187

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2938.1	2938.1	2938.1	2938.1	2938.1
2.5°	2938.1	2937.0	2937.0	2938.1	2936.0
5°	2932.8	2933.9	2932.8	2932.8	2930.7
7.5°	2921.2	2920.2	2919.1	2920.2	2917.0
10°	2901.2	2901.2	2900.1	2901.2	2899.1
12.5°	2877.0	2877.0	2877.0	2878.0	2877.0
15°	2846.4	2845.3	2845.3	2847.4	2845.3
17.5°	2810.5	2809.5	2809.5	2808.4	2806.3
20°	2766.3	2766.3	2765.2	2764.2	2761.0
22.5°	2718.8	2717.8	2714.6	2714.6	2710.4
25°	2662.9	2659.8	2657.7	2656.6	2653.5
27.5°	2601.8	2597.6	2594.4	2592.3	2589.2
30°	2533.3	2529.1	2525.9	2522.7	2520.6
32.5°	2459.5	2457.4	2452.1	2451.0	2446.8
35°	2380.4	2377.3	2374.1	2369.9	2365.7
37.5°	2296.1	2292.9	2285.5	2283.4	2280.3
40°	2206.5	2202.3	2192.8	2192.8	2189.6
42.5°	2110.5	2106.3	2100.0	2095.8	2093.7
45°	2010.4	2006.2	1998.8	1994.6	1992.5
47.5°	1903.9	1900.7	1892.3	1889.2	1886.0
50°	1793.2	1789.0	1779.5	1777.4	1774.2
52.5°	1677.3	1675.1	1662.5	1661.4	1658.3
55°	1562.3	1550.8	1540.2	1540.2	1538.1
57.5°	1435.8	1427.4	1413.7	1413.7	1411.6
60°	1305.1	1297.7	1281.9	1284.0	1281.9
62.5°	1177.6	1161.7	1147.0	1153.3	1148.0
65°	1032.1	1023.6	1007.8	1012.0	1011.0
67.5°	899.2	883.4	868.7	877.1	872.9
70°	751.7	743.2	728.5	736.9	726.4
72.5°	612.5	605.1	590.4	599.8	589.3
75°	477.6	470.2	458.6	467.0	456.5
77.5°	350.0	344.7	334.2	342.6	344.7
80°	234.0	227.7	222.4	229.8	231.9
82.5°	137.0	132.8	130.7	131.8	137.0
85°	66.4	61.1	61.1	62.2	62.2
87.5°	17.9	15.8	17.9	19.0	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)