

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: P590762

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590762
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4HI-40-UNV-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9013.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

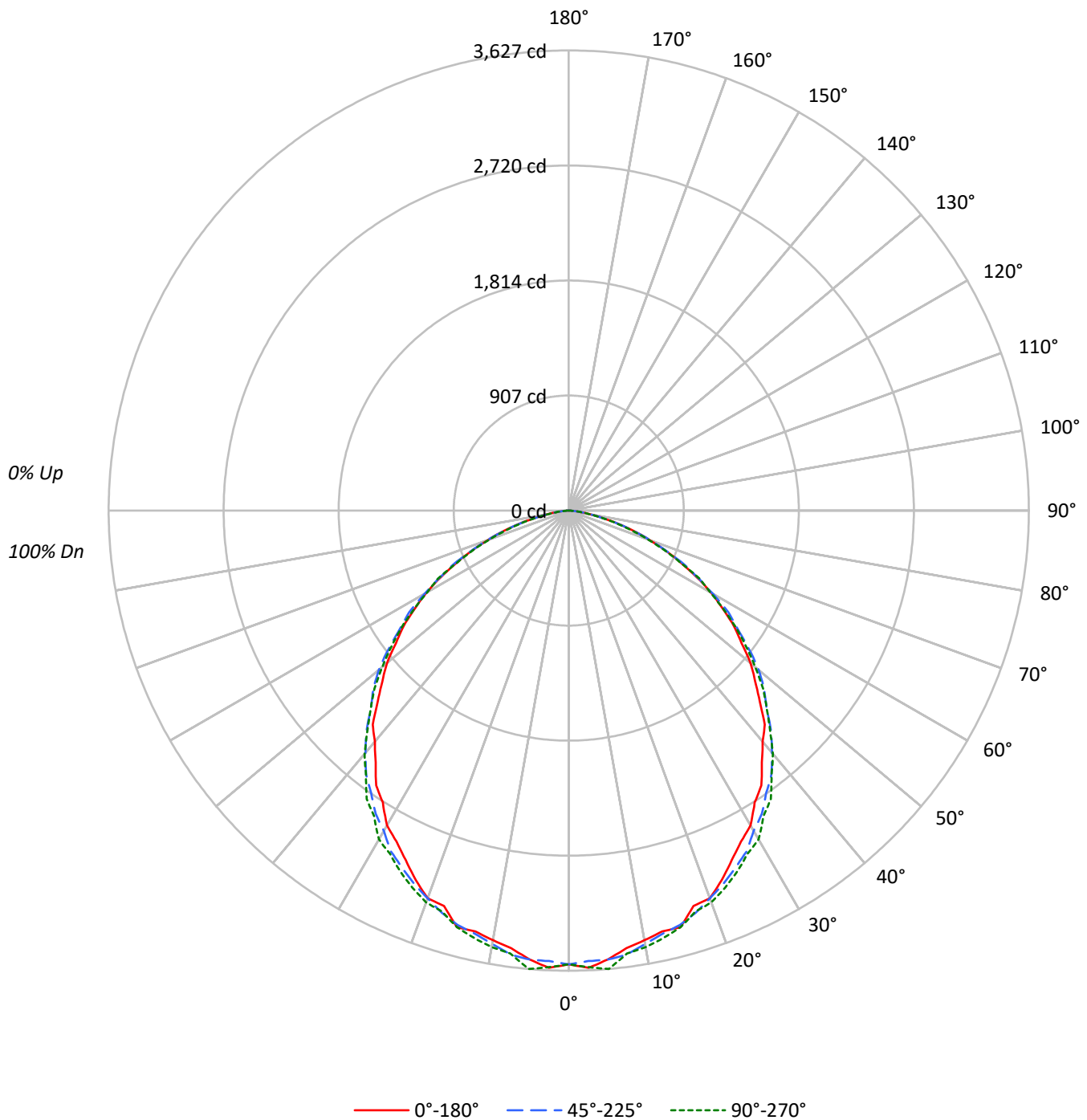
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86		
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73		
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62		
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53		
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46		
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41		
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36		
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32		
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29		
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9623	9623	9623
5°	9591	9595	9797
10°	9397	9479	9546
15°	9471	9420	9473
20°	9311	9311	9411
25°	9025	9223	9324
30°	8901	9057	9299
35°	8691	8919	9119
40°	8353	8755	8794
45°	8101	8389	8401
50°	7834	8188	8032
55°	7465	7610	7556
60°	6980	7050	6923
65°	6224	6383	6180
70°	5340	5359	5209
75°	4230	4220	4057
80°	2833	2755	2647
85°	1541	1525	1426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 8605 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.4	3.7
10°-20°	953.4	10.6
20°-30°	1428.3	15.8
30°-40°	1692.9	18.8
40°-50°	1696.0	18.8
50°-60°	1439.6	16.0
60°-70°	970.6	10.8
70°-80°	426.5	4.7
80°-90°	69.3	0.8
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°	2718.1	30.2
0°-40°	4411.0	48.9
0°-60°	7546.6	83.7
0°-90°	9013.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9013.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3576	3576	3576	3576	3576	
5°	3551	3542	3552	3542	3627	335
15°	3400	3360	3381	3399	3400	947
25°	3040	3056	3106	3147	3140	1405
35°	2646	2654	2715	2778	2776	1643
45°	2129	2168	2204	2261	2208	1647
55°	1591	1580	1622	1611	1610	1415
65°	978	965	1002	964	971	972
75°	407	398	406	377	390	436
85°	50	48	49	48	46	72
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3576.1	3576.1	3576.1	3576.1	3576.1
2.5°	3607.1	3579.8	3554.4	3584.0	3602.0
5°	3550.7	3542.4	3552.1	3541.5	3626.9
7.5°	3477.8	3509.6	3528.1	3516.6	3521.6
10°	3439.0	3427.9	3469.0	3497.6	3493.5
12.5°	3397.4	3414.1	3416.4	3447.3	3450.1
15°	3399.7	3360.5	3381.3	3398.8	3400.2
17.5°	3267.7	3310.2	3324.5	3364.7	3314.8
20°	3251.5	3220.6	3251.5	3292.6	3286.2
22.5°	3152.3	3117.6	3184.1	3220.6	3218.3
25°	3039.6	3056.2	3106.1	3146.7	3140.3
27.5°	2940.8	2960.2	3031.3	3087.2	3051.1
30°	2864.6	2854.9	2914.9	2964.8	2992.5
32.5°	2728.4	2763.5	2833.7	2883.1	2856.7
35°	2645.7	2653.6	2715.0	2777.8	2775.9
37.5°	2501.2	2537.7	2624.0	2641.6	2625.4
40°	2377.9	2414.4	2492.4	2511.4	2503.5
42.5°	2287.0	2293.4	2360.4	2382.1	2347.5
45°	2128.6	2168.3	2204.3	2261.1	2207.6
47.5°	1993.8	2012.2	2089.8	2105.0	2076.9
50°	1871.4	1877.9	1955.9	1937.0	1918.5
52.5°	1717.7	1744.9	1788.8	1785.1	1763.4
55°	1591.1	1580.5	1622.1	1611.0	1610.5
57.5°	1439.2	1457.7	1491.9	1474.3	1446.2
60°	1297.0	1297.5	1309.9	1290.1	1286.4
62.5°	1138.6	1144.2	1146.9	1122.5	1162.2
65°	977.5	964.6	1002.4	964.1	970.6
67.5°	829.3	835.7	832.0	808.0	817.3
70°	678.7	687.1	681.1	653.8	662.1
72.5°	541.2	531.0	537.5	503.3	519.0
75°	406.8	398.5	405.9	377.2	390.2
77.5°	277.0	283.5	278.9	263.7	272.4
80°	182.8	177.8	177.8	169.0	170.8
82.5°	106.7	101.6	100.2	97.4	101.6
85°	49.9	48.5	49.4	48.0	46.2
87.5°	18.0	18.5	18.5	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)