

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: P563139

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563139
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3HI-40-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13505.0 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

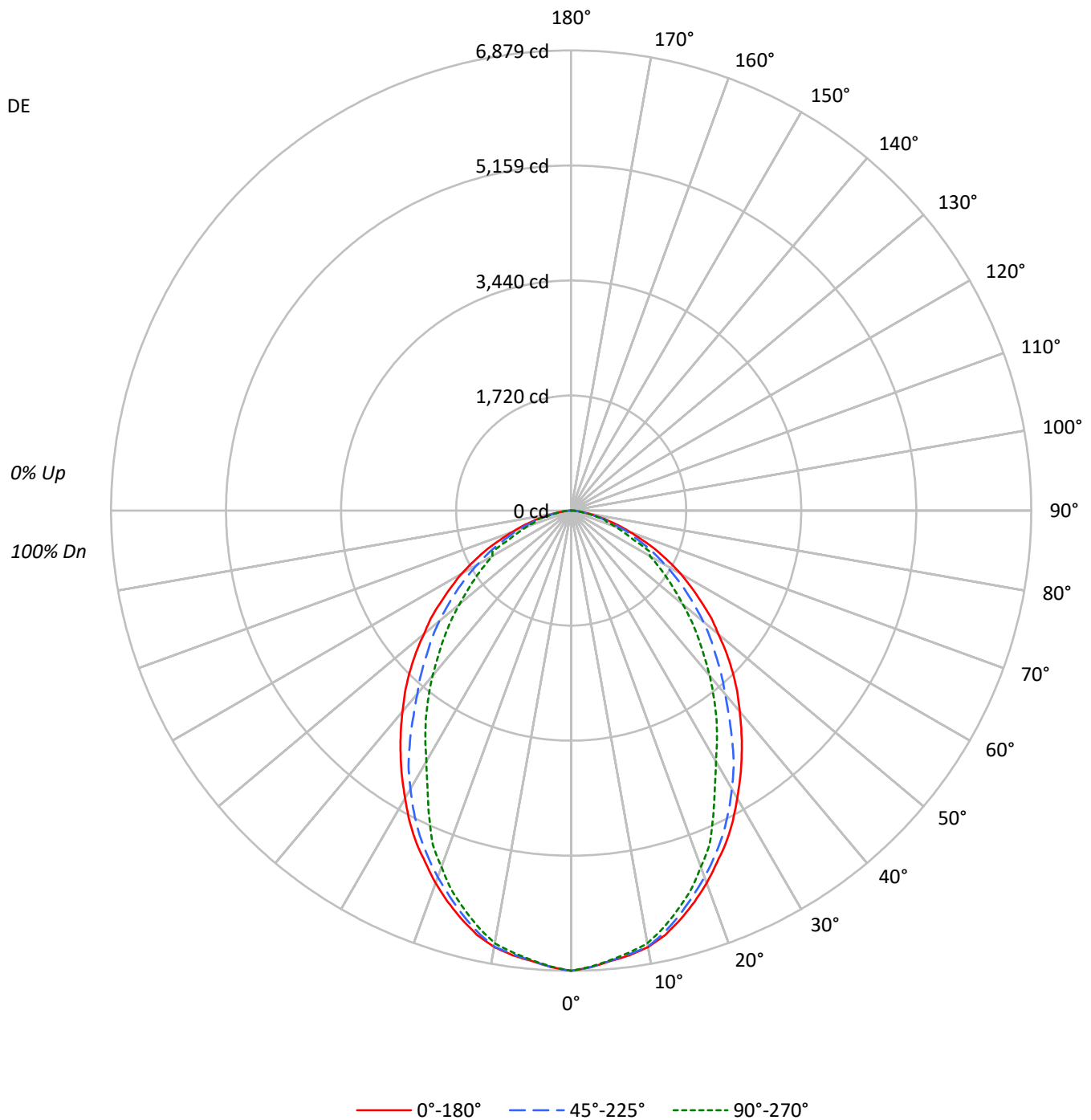
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563139

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563139

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-81-85-EDD

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	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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9256	9256	9256
5°	9130	9119	9109
10°	9051	9040	8975
15°	8807	8718	8597
20°	8484	8347	8119
25°	8135	7958	7462
30°	7710	7463	6722
35°	7302	6897	6218
40°	6887	6286	5657
45°	6492	5811	5115
50°	6010	5394	4561
55°	5560	4888	4086
60°	5093	4366	3659
65°	4482	3823	3241
70°	3692	3348	2753
75°	2936	2563	2687
80°	1972	1849	1726
85°	1227	1473	1718

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6492 cd/sqm



TEST NUMBER: P563139

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	640.4	4.7
10°-20°	1757.4	13.0
20°-30°	2433.1	18.0
30°-40°	2594.3	19.2
40°-50°	2366.8	17.5
50°-60°	1854.2	13.7
60°-70°	1208.5	8.9
70°-80°	535.4	4.0
80°-90°	114.9	0.9
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°	4830.9	35.8
0°-40°	7425.2	55.0
0°-60°	11646.2	86.2
0°-90°	13505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6879	6879	6879	6879	6879	
5°	6760	6752	6752	6744	6744	642
15°	6323	6323	6259	6195	6172	1777
25°	5480	5448	5360	5169	5026	2516
35°	4446	4414	4199	3881	3786	2779
45°	3412	3340	3054	2799	2688	2628
55°	2370	2298	2084	1837	1742	2126
65°	1408	1328	1201	1225	1018	1387
75°	565	525	493	469	517	605
85°	80	88	95	103	111	110
90°	0	0	0	0	0	



TEST NUMBER: P563139

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6879.3	6879.3	6879.3	6879.3	6879.3
2.5°	6831.5	6831.5	6831.5	6823.6	6823.6
5°	6760.0	6752.0	6752.0	6744.1	6744.1
7.5°	6704.3	6696.3	6688.4	6680.4	6664.5
10°	6624.8	6624.8	6616.8	6577.1	6569.1
12.5°	6497.5	6489.6	6457.8	6402.1	6386.2
15°	6322.6	6322.6	6258.9	6195.3	6171.5
17.5°	6131.7	6123.7	6044.2	5980.6	5948.8
20°	5924.9	5909.0	5829.5	5726.1	5670.4
22.5°	5694.3	5694.3	5598.8	5463.6	5408.0
25°	5479.6	5447.7	5360.3	5169.4	5026.2
27.5°	5233.0	5185.3	5089.9	4819.5	4652.5
30°	4962.6	4938.8	4803.6	4453.6	4326.4
32.5°	4708.1	4668.4	4525.2	4159.4	4056.0
35°	4445.7	4413.9	4199.1	3881.0	3785.6
37.5°	4183.2	4143.5	3873.1	3618.6	3499.3
40°	3920.8	3873.1	3578.8	3348.2	3220.9
42.5°	3674.2	3610.6	3324.3	3077.8	2934.6
45°	3411.8	3340.2	3053.9	2799.4	2688.1
47.5°	3149.4	3085.7	2823.3	2560.8	2433.6
50°	2871.0	2815.3	2576.7	2314.3	2179.1
52.5°	2640.4	2552.9	2322.2	2059.8	1948.5
55°	2370.0	2298.4	2083.7	1837.1	1741.7
57.5°	2123.4	2051.9	1853.0	1622.4	1542.9
60°	1892.8	1789.4	1622.4	1423.6	1359.9
62.5°	1638.3	1558.8	1415.6	1248.6	1328.1
65°	1407.7	1328.1	1200.9	1224.7	1018.0
67.5°	1153.2	1113.4	1002.1	890.7	858.9
70°	938.4	890.7	851.0	731.7	699.9
72.5°	747.6	699.9	644.2	580.6	556.7
75°	564.7	524.9	493.1	469.2	516.9
77.5°	389.7	373.8	349.9	326.1	318.1
80°	254.5	246.5	238.6	230.6	222.7
82.5°	151.1	151.1	151.1	151.1	151.1
85°	79.5	87.5	95.4	103.4	111.3
87.5°	47.7	47.7	55.7	63.6	71.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)