

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: P562544

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562544
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-LD4-2HI-40-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8124.0 lumens
Efficiency: N/A
Efficacy: 94.0 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

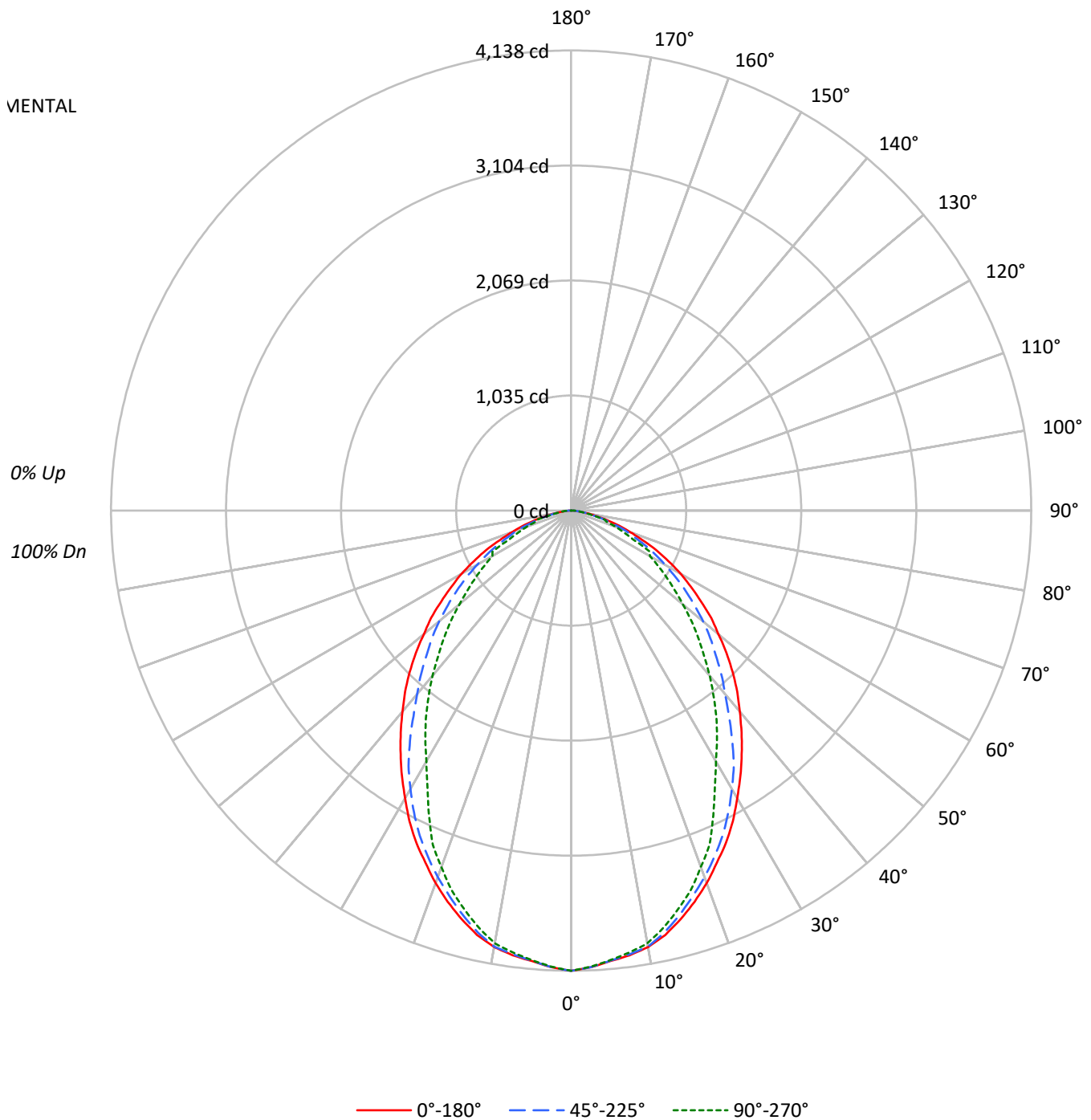
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562544

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-84-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562544

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-84-EDD-90

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	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°	5568	5568	5568
5°	5492	5486	5479
10°	5445	5438	5399
15°	5298	5245	5171
20°	5103	5021	4884
25°	4894	4787	4489
30°	4638	4489	4043
35°	4393	4149	3740
40°	4143	3781	3403
45°	3905	3496	3077
50°	3615	3245	2744
55°	3344	2940	2458
60°	3064	2626	2201
65°	2696	2300	1950
70°	2221	2014	1656
75°	1766	1542	1617
80°	1186	1112	1038
85°	738	886	1034

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3905 cd/sqm



TEST NUMBER: P562544

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.2	4.7
10°-20°	1057.2	13.0
20°-30°	1463.6	18.0
30°-40°	1560.6	19.2
40°-50°	1423.8	17.5
50°-60°	1115.4	13.7
60°-70°	727.0	8.9
70°-80°	322.1	4.0
80°-90°	69.2	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°	2906.0	35.8
0°-40°	4466.7	55.0
0°-60°	7005.8	86.2
0°-90°	8124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4138	4138	4138	4138	4138	
5°	4066	4062	4062	4057	4057	386
15°	3803	3803	3765	3727	3712	1069
25°	3296	3277	3224	3110	3024	1513
35°	2674	2655	2526	2335	2277	1672
45°	2052	2009	1837	1684	1617	1581
55°	1426	1383	1253	1105	1048	1279
65°	847	799	722	737	612	835
75°	340	316	297	282	311	364
85°	48	53	57	62	67	66
90°	0	0	0	0	0	



TEST NUMBER: P562544

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4138.3	4138.3	4138.3	4138.3	4138.3
2.5°	4109.6	4109.6	4109.6	4104.8	4104.8
5°	4066.5	4061.7	4061.7	4056.9	4056.9
7.5°	4033.0	4028.2	4023.4	4018.7	4009.1
10°	3985.2	3985.2	3980.4	3956.5	3951.7
12.5°	3908.6	3903.8	3884.7	3851.2	3841.6
15°	3803.4	3803.4	3765.1	3726.8	3712.5
17.5°	3688.6	3683.8	3635.9	3597.7	3578.5
20°	3564.2	3554.6	3506.8	3444.6	3411.1
22.5°	3425.4	3425.4	3368.0	3286.7	3253.2
25°	3296.3	3277.1	3224.5	3109.7	3023.6
27.5°	3147.9	3119.2	3061.8	2899.2	2798.7
30°	2985.3	2970.9	2889.6	2679.1	2602.6
32.5°	2832.2	2808.3	2722.2	2502.1	2439.9
35°	2674.3	2655.2	2526.0	2334.6	2277.2
37.5°	2516.4	2492.5	2329.9	2176.8	2105.0
40°	2358.6	2329.9	2152.9	2014.1	1937.6
42.5°	2210.3	2172.0	1999.8	1851.5	1765.3
45°	2052.4	2009.3	1837.1	1684.0	1617.0
47.5°	1894.5	1856.2	1698.4	1540.5	1463.9
50°	1727.1	1693.6	1550.1	1392.2	1310.8
52.5°	1588.3	1535.7	1397.0	1239.1	1172.1
55°	1425.7	1382.6	1253.4	1105.1	1047.7
57.5°	1277.4	1234.3	1114.7	976.0	928.1
60°	1138.6	1076.4	976.0	856.4	818.1
62.5°	985.5	937.7	851.6	751.1	798.9
65°	846.8	798.9	722.4	736.8	612.4
67.5°	693.7	669.8	602.8	535.8	516.7
70°	564.5	535.8	511.9	440.1	421.0
72.5°	449.7	421.0	387.5	349.2	334.9
75°	339.7	315.8	296.6	282.3	311.0
77.5°	234.4	224.9	210.5	196.1	191.4
80°	153.1	148.3	143.5	138.7	134.0
82.5°	90.9	90.9	90.9	90.9	90.9
85°	47.8	52.6	57.4	62.2	67.0
87.5°	28.7	28.7	33.5	38.3	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)