

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: P563451

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563451
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-LD4-3STD-35-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11734.0 lumens
Efficiency: N/A
Efficacy: 117.5 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

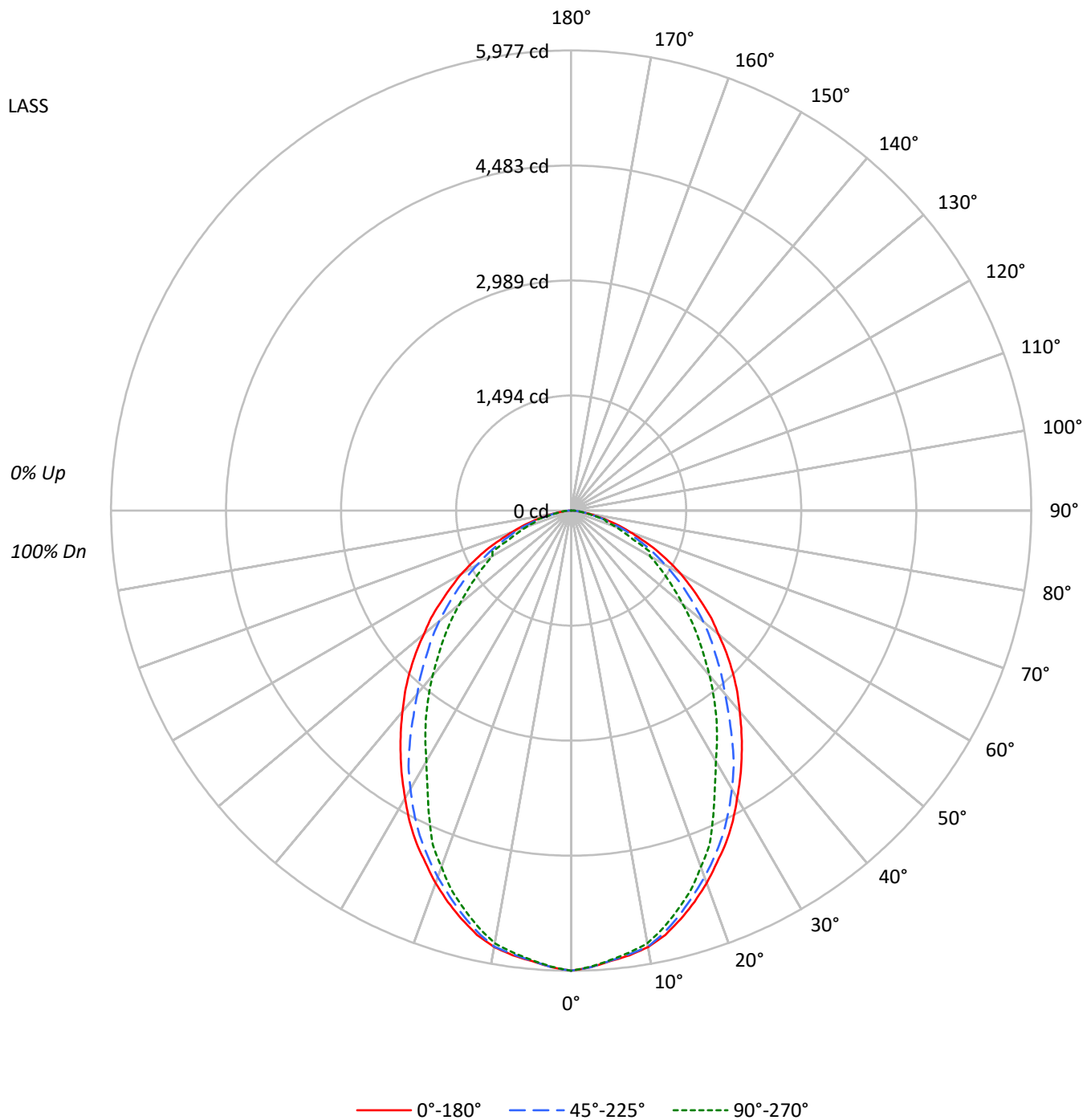
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563451

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-80-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563451

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-80-94-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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8042	8042	8042
5°	7933	7924	7914
10°	7864	7855	7798
15°	7652	7575	7469
20°	7371	7252	7054
25°	7068	6914	6483
30°	6699	6484	5840
35°	6345	5993	5403
40°	5983	5462	4915
45°	5641	5049	4444
50°	5222	4686	3963
55°	4830	4247	3550
60°	4426	3793	3180
65°	3894	3322	2816
70°	3208	2909	2392
75°	2550	2227	2335
80°	1713	1606	1499
85°	1067	1280	1493

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5641 cd/sqm



TEST NUMBER: P563451

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-80-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	556.4	4.7
10°-20°	1527.0	13.0
20°-30°	2114.0	18.0
30°-40°	2254.1	19.2
40°-50°	2056.4	17.5
50°-60°	1611.0	13.7
60°-70°	1050.0	8.9
70°-80°	465.2	4.0
80°-90°	99.9	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°	4197.3	35.8
0°-40°	6451.5	55.0
0°-60°	10118.9	86.2
0°-90°	11734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11734.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5977	5977	5977	5977	5977	
5°	5874	5867	5867	5860	5860	558
15°	5493	5493	5438	5383	5362	1544
25°	4761	4733	4657	4492	4367	2186
35°	3863	3835	3648	3372	3289	2415
45°	2964	2902	2653	2432	2336	2283
55°	2059	1997	1810	1596	1513	1847
65°	1223	1154	1043	1064	884	1205
75°	491	456	428	408	449	526
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



TEST NUMBER: P563451

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-80-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5977.1	5977.1	5977.1	5977.1	5977.1
2.5°	5935.7	5935.7	5935.7	5928.8	5928.8
5°	5873.5	5866.6	5866.6	5859.7	5859.7
7.5°	5825.1	5818.2	5811.3	5804.4	5790.6
10°	5756.0	5756.0	5749.1	5714.6	5707.7
12.5°	5645.5	5638.6	5610.9	5562.5	5548.7
15°	5493.4	5493.4	5438.2	5382.9	5362.2
17.5°	5327.6	5320.7	5251.6	5196.3	5168.7
20°	5147.9	5134.1	5065.0	4975.2	4926.8
22.5°	4947.6	4947.6	4864.6	4747.2	4698.8
25°	4761.0	4733.3	4657.3	4491.5	4367.1
27.5°	4546.8	4505.3	4422.4	4187.5	4042.3
30°	4311.8	4291.1	4173.6	3869.6	3759.0
32.5°	4090.7	4056.2	3931.8	3613.9	3524.1
35°	3862.7	3835.0	3648.5	3372.1	3289.2
37.5°	3634.7	3600.1	3365.2	3144.0	3040.4
40°	3406.6	3365.2	3109.5	2909.1	2798.5
42.5°	3192.4	3137.1	2888.4	2674.2	2549.8
45°	2964.4	2902.2	2653.4	2432.3	2335.6
47.5°	2736.4	2681.1	2453.0	2225.0	2114.5
50°	2494.5	2446.1	2238.8	2010.8	1893.3
52.5°	2294.1	2218.1	2017.7	1789.7	1692.9
55°	2059.2	1997.0	1810.4	1596.2	1513.3
57.5°	1845.0	1782.8	1610.0	1409.6	1340.5
60°	1644.6	1554.7	1409.6	1236.9	1181.6
62.5°	1423.5	1354.4	1230.0	1084.9	1154.0
65°	1223.1	1154.0	1043.4	1064.1	884.5
67.5°	1001.9	967.4	870.7	773.9	746.3
70°	815.4	773.9	739.4	635.7	608.1
72.5°	649.5	608.1	559.7	504.4	483.7
75°	490.6	456.1	428.4	407.7	449.1
77.5°	338.6	324.8	304.0	283.3	276.4
80°	221.1	214.2	207.3	200.4	193.5
82.5°	131.3	131.3	131.3	131.3	131.3
85°	69.1	76.0	82.9	89.8	96.7
87.5°	41.5	41.5	48.4	55.3	62.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)