

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: P563937

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563937
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-LD4-4LO-40-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11796.0 lumens
Efficiency: N/A
Efficacy: 126.0 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

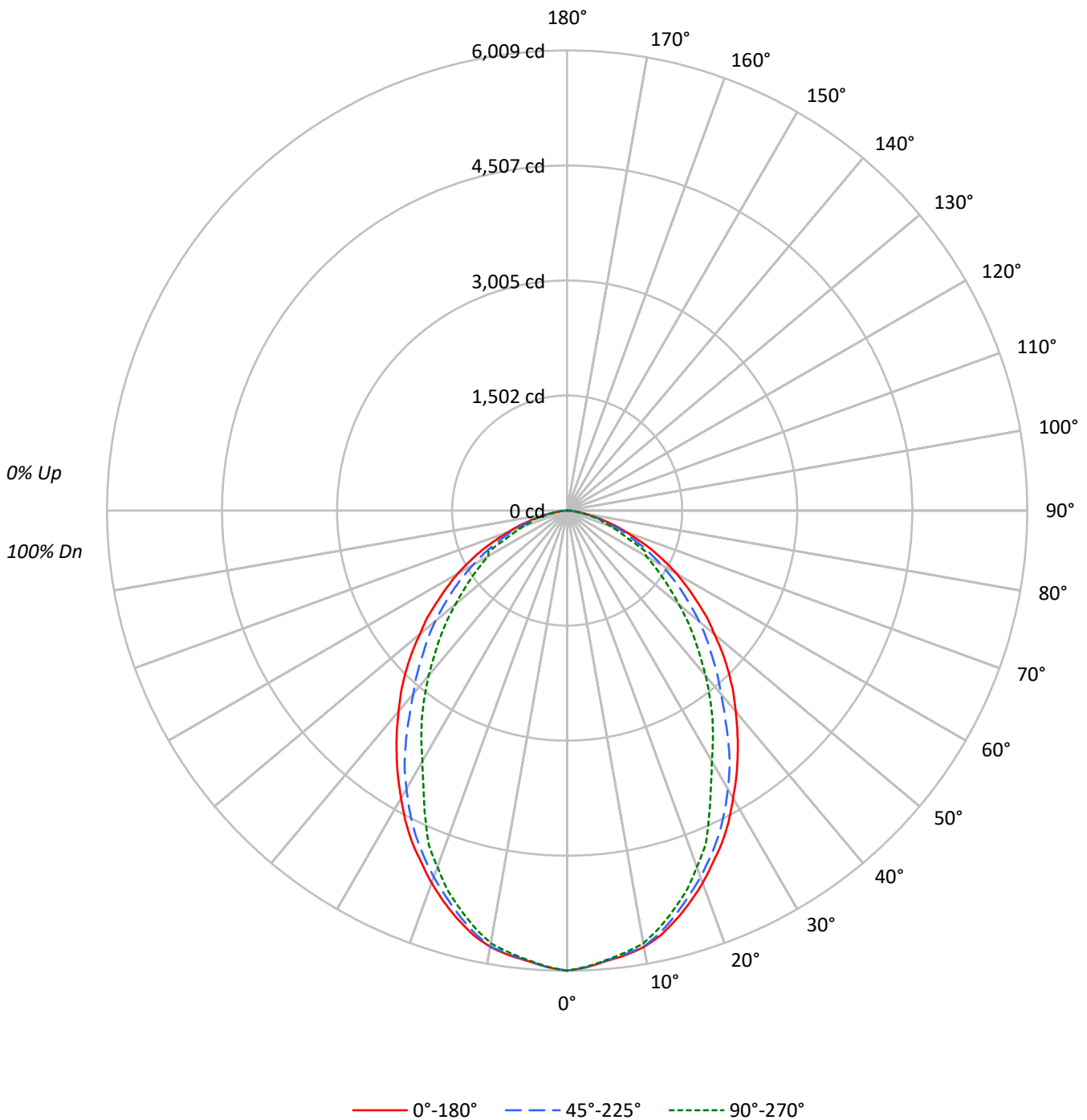
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563937

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563937

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-93-84-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°	8085	8085	8085
5°	7975	7965	7956
10°	7906	7896	7839
15°	7693	7615	7509
20°	7410	7291	7092
25°	7105	6951	6518
30°	6734	6519	5871
35°	6378	6025	5431
40°	6015	5490	4941
45°	5670	5076	4468
50°	5249	4711	3984
55°	4856	4269	3569
60°	4449	3813	3197
65°	3914	3339	2831
70°	3225	2924	2405
75°	2564	2239	2347
80°	1722	1615	1507
85°	1073	1288	1502

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5670 cd/sqm



TEST NUMBER: P563937

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.3	4.7
10°-20°	1535.0	13.0
20°-30°	2125.2	18.0
30°-40°	2266.0	19.2
40°-50°	2067.3	17.5
50°-60°	1619.5	13.7
60°-70°	1055.6	8.9
70°-80°	467.7	4.0
80°-90°	100.4	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°	4219.5	35.8
0°-40°	6485.6	55.0
0°-60°	10172.4	86.2
0°-90°	11796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6009	6009	6009	6009	6009	
5°	5904	5898	5898	5891	5891	560
15°	5522	5522	5467	5411	5390	1553
25°	4786	4758	4682	4515	4390	2197
35°	3883	3855	3668	3390	3306	2428
45°	2980	2918	2668	2445	2348	2296
55°	2070	2008	1820	1605	1521	1857
65°	1230	1160	1049	1070	889	1212
75°	493	458	431	410	452	529
85°	70	76	83	90	97	96
90°	0	0	0	0	0	



TEST NUMBER: P563937

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6008.7	6008.7	6008.7	6008.7	6008.7
2.5°	5967.0	5967.0	5967.0	5960.1	5960.1
5°	5904.5	5897.6	5897.6	5890.6	5890.6
7.5°	5855.9	5849.0	5842.0	5835.1	5821.2
10°	5786.4	5786.4	5779.5	5744.8	5737.8
12.5°	5675.3	5668.3	5640.6	5591.9	5578.0
15°	5522.5	5522.5	5466.9	5411.3	5390.5
17.5°	5355.8	5348.8	5279.3	5223.8	5196.0
20°	5175.1	5161.3	5091.8	5001.5	4952.9
22.5°	4973.7	4973.7	4890.3	4772.2	4723.6
25°	4786.1	4758.4	4681.9	4515.2	4390.2
27.5°	4570.8	4529.1	4445.8	4209.6	4063.7
30°	4334.6	4313.8	4195.7	3890.0	3778.9
32.5°	4112.3	4077.6	3952.6	3633.0	3542.7
35°	3883.1	3855.3	3667.8	3389.9	3306.5
37.5°	3653.9	3619.1	3382.9	3160.7	3056.5
40°	3424.6	3382.9	3125.9	2924.5	2813.3
42.5°	3209.3	3153.7	2903.6	2688.3	2563.3
45°	2980.0	2917.5	2667.5	2445.2	2347.9
47.5°	2750.8	2695.2	2466.0	2236.8	2125.6
50°	2507.7	2459.1	2250.7	2021.4	1903.3
52.5°	2306.2	2229.8	2028.4	1799.1	1701.9
55°	2070.1	2007.5	1820.0	1604.6	1521.3
57.5°	1854.7	1792.2	1618.5	1417.1	1347.6
60°	1653.3	1563.0	1417.1	1243.4	1187.9
62.5°	1431.0	1361.5	1236.5	1090.6	1160.1
65°	1229.5	1160.1	1048.9	1069.8	889.2
67.5°	1007.2	972.5	875.3	778.0	750.2
70°	819.7	778.0	743.3	639.1	611.3
72.5°	653.0	611.3	562.7	507.1	486.3
75°	493.2	458.5	430.7	409.8	451.5
77.5°	340.4	326.5	305.6	284.8	277.9
80°	222.3	215.3	208.4	201.4	194.5
82.5°	132.0	132.0	132.0	132.0	132.0
85°	69.5	76.4	83.4	90.3	97.3
87.5°	41.7	41.7	48.6	55.6	62.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)