

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: P562605

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562605
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-93-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9603.0 lumens
Efficiency: N/A
Efficacy: 111.1 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

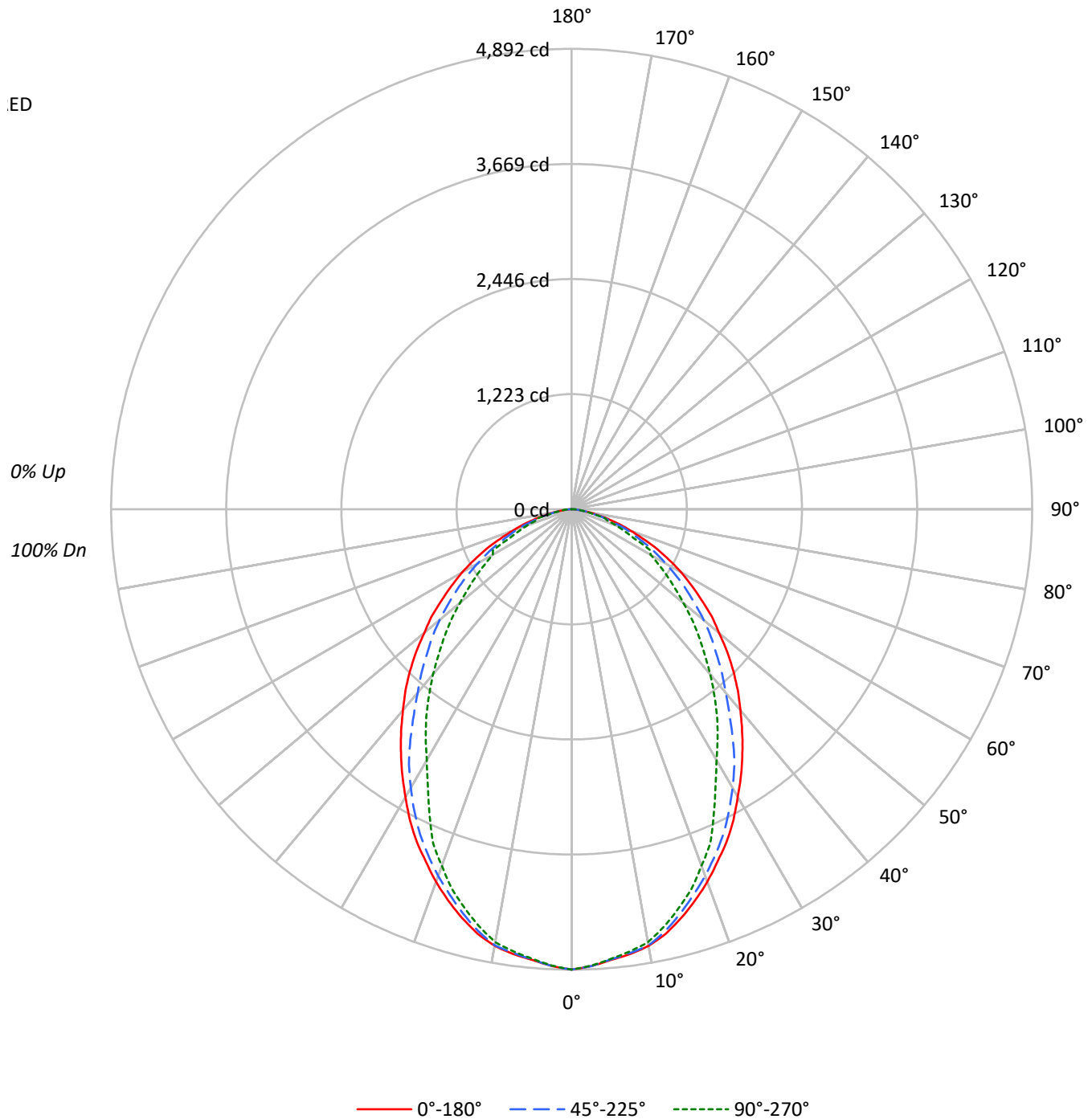
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562605

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562605

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-96-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	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°	6582	6582	6582
5°	6492	6485	6477
10°	6436	6428	6382
15°	6262	6199	6113
20°	6032	5935	5773
25°	5784	5658	5306
30°	5482	5307	4780
35°	5192	4904	4421
40°	4897	4470	4023
45°	4616	4132	3637
50°	4273	3835	3243
55°	3953	3476	2905
60°	3622	3104	2602
65°	3187	2719	2304
70°	2625	2380	1958
75°	2087	1823	1911
80°	1402	1315	1227
85°	874	1048	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4616 cd/sqm



TEST NUMBER: P562605

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	455.3	4.7
10°-20°	1249.7	13.0
20°-30°	1730.1	18.0
30°-40°	1844.8	19.2
40°-50°	1682.9	17.5
50°-60°	1318.5	13.7
60°-70°	859.3	8.9
70°-80°	380.7	4.0
80°-90°	81.7	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°	3435.1	35.8
0°-40°	5279.8	55.0
0°-60°	8281.2	86.2
0°-90°	9603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9603.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4892	4892	4892	4892	4892	
5°	4807	4801	4801	4796	4796	456
15°	4496	4496	4450	4405	4388	1264
25°	3896	3874	3812	3676	3574	1789
35°	3161	3139	2986	2760	2692	1976
45°	2426	2375	2172	1991	1911	1869
55°	1685	1634	1482	1306	1238	1512
65°	1001	944	854	871	724	986
75°	402	373	351	334	368	430
85°	57	62	68	74	79	78
90°	0	0	0	0	0	



TEST NUMBER: P562605

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4891.6	4891.6	4891.6	4891.6	4891.6
2.5°	4857.7	4857.7	4857.7	4852.1	4852.1
5°	4806.8	4801.2	4801.2	4795.5	4795.5
7.5°	4767.2	4761.6	4755.9	4750.3	4739.0
10°	4710.7	4710.7	4705.0	4676.7	4671.1
12.5°	4620.2	4614.5	4591.9	4552.3	4541.0
15°	4495.8	4495.8	4450.5	4405.3	4388.3
17.5°	4360.1	4354.4	4297.9	4252.6	4230.0
20°	4213.0	4201.7	4145.2	4071.7	4032.1
22.5°	4049.0	4049.0	3981.2	3885.0	3845.5
25°	3896.3	3873.7	3811.5	3675.8	3574.0
27.5°	3721.0	3687.1	3619.2	3427.0	3308.2
30°	3528.8	3511.8	3415.7	3166.8	3076.4
32.5°	3347.8	3319.5	3217.7	2957.6	2884.1
35°	3161.2	3138.6	2985.9	2759.7	2691.8
37.5°	2974.6	2946.3	2754.0	2573.1	2488.2
40°	2788.0	2754.0	2544.8	2380.8	2290.3
42.5°	2612.6	2567.4	2363.8	2188.5	2086.7
45°	2426.0	2375.1	2171.5	1990.6	1911.4
47.5°	2239.4	2194.2	2007.6	1820.9	1730.5
50°	2041.5	2001.9	1832.2	1645.6	1549.5
52.5°	1877.5	1815.3	1651.3	1464.7	1385.5
55°	1685.2	1634.3	1481.6	1306.3	1238.5
57.5°	1509.9	1459.0	1317.6	1153.6	1097.1
60°	1345.9	1272.4	1153.6	1012.3	967.0
62.5°	1164.9	1108.4	1006.6	887.8	944.4
65°	1000.9	944.4	853.9	870.9	723.8
67.5°	820.0	791.7	712.5	633.4	610.7
70°	667.3	633.4	605.1	520.3	497.6
72.5°	531.6	497.6	458.1	412.8	395.9
75°	401.5	373.2	350.6	333.6	367.6
77.5°	277.1	265.8	248.8	231.9	226.2
80°	181.0	175.3	169.7	164.0	158.3
82.5°	107.4	107.4	107.4	107.4	107.4
85°	56.6	62.2	67.9	73.5	79.2
87.5°	33.9	33.9	39.6	45.2	50.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)