

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: P589905

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589905
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-40-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2045.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

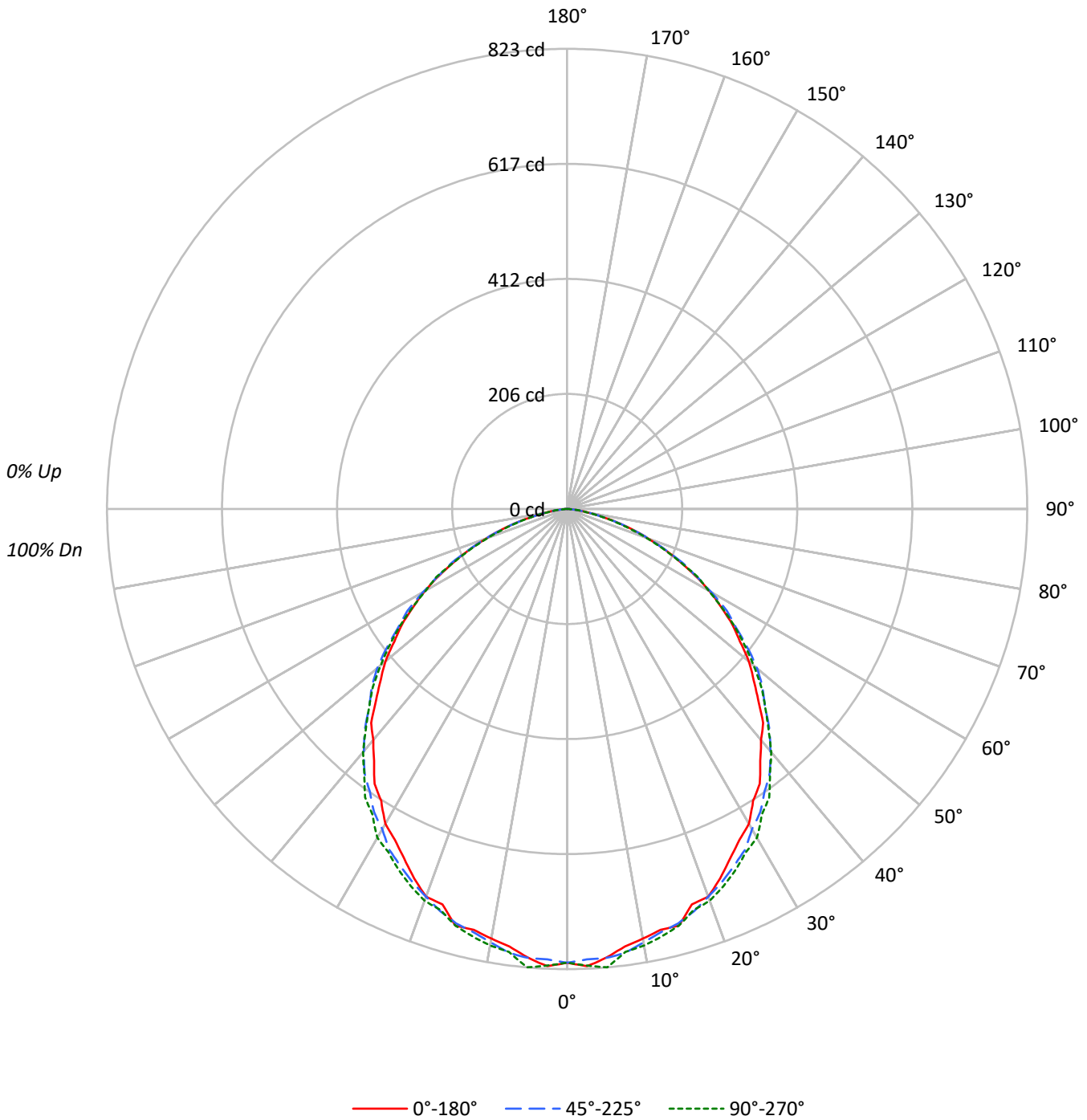
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P589905

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-93-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589905

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-93-88-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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2183	2183	2183
5°	2176	2177	2223
10°	2132	2151	2166
15°	2149	2137	2149
20°	2113	2113	2135
25°	2048	2093	2116
30°	2020	2055	2110
35°	1972	2024	2069
40°	1895	1987	1995
45°	1838	1903	1906
50°	1778	1858	1822
55°	1694	1727	1714
60°	1584	1600	1571
65°	1412	1448	1402
70°	1212	1216	1182
75°	960	958	920
80°	643	625	601
85°	349	346	324

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1952 cd/sqm



TEST NUMBER: P589905

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-93-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	3.7
10°-20°	216.3	10.6
20°-30°	324.1	15.8
30°-40°	384.1	18.8
40°-50°	384.8	18.8
50°-60°	326.6	16.0
60°-70°	220.2	10.8
70°-80°	96.8	4.7
80°-90°	15.7	0.8
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°	616.7	30.2
0°-40°	1000.8	48.9
0°-60°	1712.3	83.7
0°-90°	2045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	811	811	811	811	811	
5°	806	804	806	804	823	76
15°	771	762	767	771	772	215
25°	690	693	705	714	712	319
35°	600	602	616	630	630	373
45°	483	492	500	513	501	374
55°	361	359	368	366	365	321
65°	222	219	227	219	220	221
75°	92	90	92	86	88	99
85°	11	11	11	11	10	16
90°	0	0	0	0	0	



TEST NUMBER: P589905

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-93-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	811.4	811.4	811.4	811.4	811.4
2.5°	818.4	812.2	806.5	813.2	817.3
5°	805.6	803.8	806.0	803.5	822.9
7.5°	789.1	796.3	800.5	797.9	799.0
10°	780.3	777.8	787.1	793.6	792.7
12.5°	770.9	774.6	775.2	782.2	782.8
15°	771.4	762.5	767.2	771.2	771.5
17.5°	741.4	751.1	754.3	763.4	752.1
20°	737.8	730.7	737.8	747.1	745.6
22.5°	715.2	707.4	722.5	730.7	730.2
25°	689.7	693.4	704.8	714.0	712.5
27.5°	667.2	671.6	687.8	700.5	692.3
30°	650.0	647.8	661.4	672.7	679.0
32.5°	619.1	627.0	642.9	654.2	648.2
35°	600.3	602.1	616.0	630.3	629.8
37.5°	567.5	575.8	595.4	599.4	595.7
40°	539.5	547.8	565.5	569.8	568.0
42.5°	518.9	520.4	535.6	540.5	532.6
45°	483.0	492.0	500.1	513.0	500.9
47.5°	452.4	456.6	474.2	477.6	471.2
50°	424.6	426.1	443.8	439.5	435.3
52.5°	389.7	395.9	405.9	405.0	400.1
55°	361.0	358.6	368.0	365.5	365.4
57.5°	326.6	330.7	338.5	334.5	328.1
60°	294.3	294.4	297.2	292.7	291.9
62.5°	258.4	259.6	260.2	254.7	263.7
65°	221.8	218.9	227.4	218.7	220.2
67.5°	188.2	189.6	188.8	183.3	185.4
70°	154.0	155.9	154.5	148.3	150.2
72.5°	122.8	120.5	121.9	114.2	117.8
75°	92.3	90.4	92.1	85.6	88.5
77.5°	62.9	64.3	63.3	59.8	61.8
80°	41.5	40.3	40.3	38.3	38.8
82.5°	24.2	23.0	22.7	22.1	23.0
85°	11.3	11.0	11.2	10.9	10.5
87.5°	4.1	4.2	4.2	4.0	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)