

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: P590833

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590833
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-LD4-4LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4931.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

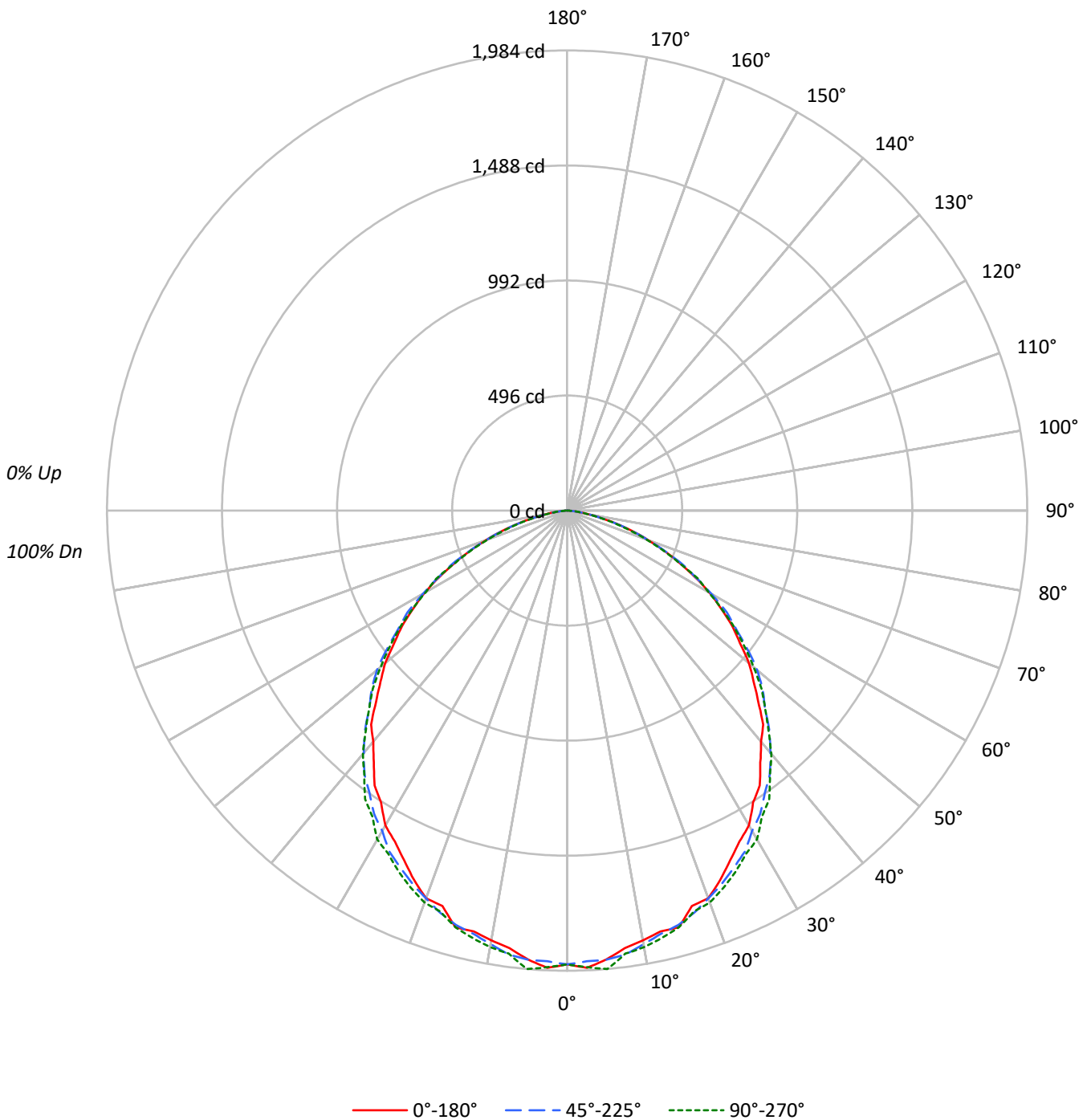
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590833

CATALOG NUMBER: FSR-24-2-LD4-4LO-35-UNV-93-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590833

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5265	5265	5265
5°	5247	5250	5360
10°	5141	5186	5223
15°	5182	5154	5183
20°	5094	5094	5149
25°	4938	5046	5101
30°	4870	4955	5087
35°	4755	4880	4989
40°	4570	4790	4812
45°	4432	4590	4596
50°	4286	4480	4394
55°	4084	4163	4134
60°	3819	3857	3788
65°	3405	3492	3381
70°	2921	2932	2850
75°	2314	2308	2220
80°	1550	1508	1449
85°	843	834	781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4708 cd/sqm

TEST NUMBER: P590833

CATALOG NUMBER: FSR-24-2-LD4-4LO-35-UNV-93-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.0	3.7
10°-20°	521.6	10.6
20°-30°	781.4	15.8
30°-40°	926.2	18.8
40°-50°	927.9	18.8
50°-60°	787.6	16.0
60°-70°	531.0	10.8
70°-80°	233.3	4.7
80°-90°	37.9	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°	1487.1	30.2
0°-40°	2413.2	48.9
0°-60°	4128.7	83.7
0°-90°	4931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1956	1956	1956	1956	1956	
5°	1943	1938	1943	1938	1984	183
15°	1860	1838	1850	1860	1860	518
25°	1663	1672	1699	1722	1718	769
35°	1448	1452	1485	1520	1519	899
45°	1165	1186	1206	1237	1208	901
55°	870	865	887	881	881	774
65°	535	528	548	528	531	532
75°	223	218	222	206	214	239
85°	27	26	27	26	25	40
90°	0	0	0	0	0	



TEST NUMBER: P590833

CATALOG NUMBER: FSR-24-2-LD4-4LO-35-UNV-93-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1956.5	1956.5	1956.5	1956.5	1956.5
2.5°	1973.4	1958.5	1944.6	1960.8	1970.6
5°	1942.6	1938.1	1943.4	1937.6	1984.3
7.5°	1902.7	1920.1	1930.2	1923.9	1926.7
10°	1881.5	1875.4	1897.9	1913.6	1911.3
12.5°	1858.7	1867.8	1869.1	1886.0	1887.5
15°	1860.0	1838.5	1849.9	1859.5	1860.3
17.5°	1787.8	1811.0	1818.8	1840.8	1813.5
20°	1778.9	1762.0	1778.9	1801.4	1797.9
22.5°	1724.6	1705.7	1742.0	1762.0	1760.7
25°	1663.0	1672.1	1699.3	1721.6	1718.0
27.5°	1608.9	1619.5	1658.4	1689.0	1669.3
30°	1567.2	1561.9	1594.8	1622.0	1637.2
32.5°	1492.7	1511.9	1550.3	1577.3	1562.9
35°	1447.5	1451.8	1485.4	1519.7	1518.7
37.5°	1368.4	1388.4	1435.6	1445.2	1436.4
40°	1301.0	1320.9	1363.6	1374.0	1369.7
42.5°	1251.2	1254.7	1291.4	1303.2	1284.3
45°	1164.6	1186.3	1206.0	1237.1	1207.7
47.5°	1090.8	1100.9	1143.3	1151.7	1136.3
50°	1023.8	1027.4	1070.1	1059.7	1049.6
52.5°	939.7	954.6	978.6	976.6	964.7
55°	870.5	864.7	887.4	881.4	881.1
57.5°	787.4	797.5	816.2	806.6	791.2
60°	709.6	709.8	716.7	705.8	703.8
62.5°	622.9	626.0	627.5	614.1	635.8
65°	534.8	527.7	548.4	527.5	531.0
67.5°	453.7	457.2	455.2	442.1	447.1
70°	371.3	375.9	372.6	357.7	362.2
72.5°	296.1	290.5	294.0	275.3	283.9
75°	222.6	218.0	222.0	206.4	213.5
77.5°	151.6	155.1	152.6	144.2	149.0
80°	100.0	97.3	97.3	92.5	93.5
82.5°	58.4	55.6	54.8	53.3	55.6
85°	27.3	26.5	27.0	26.3	25.3
87.5°	9.9	10.1	10.1	9.6	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)