

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: P590841

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590841
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-40-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC 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: 4970.0 lumens
Efficiency: N/A
Efficacy: 106.2 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

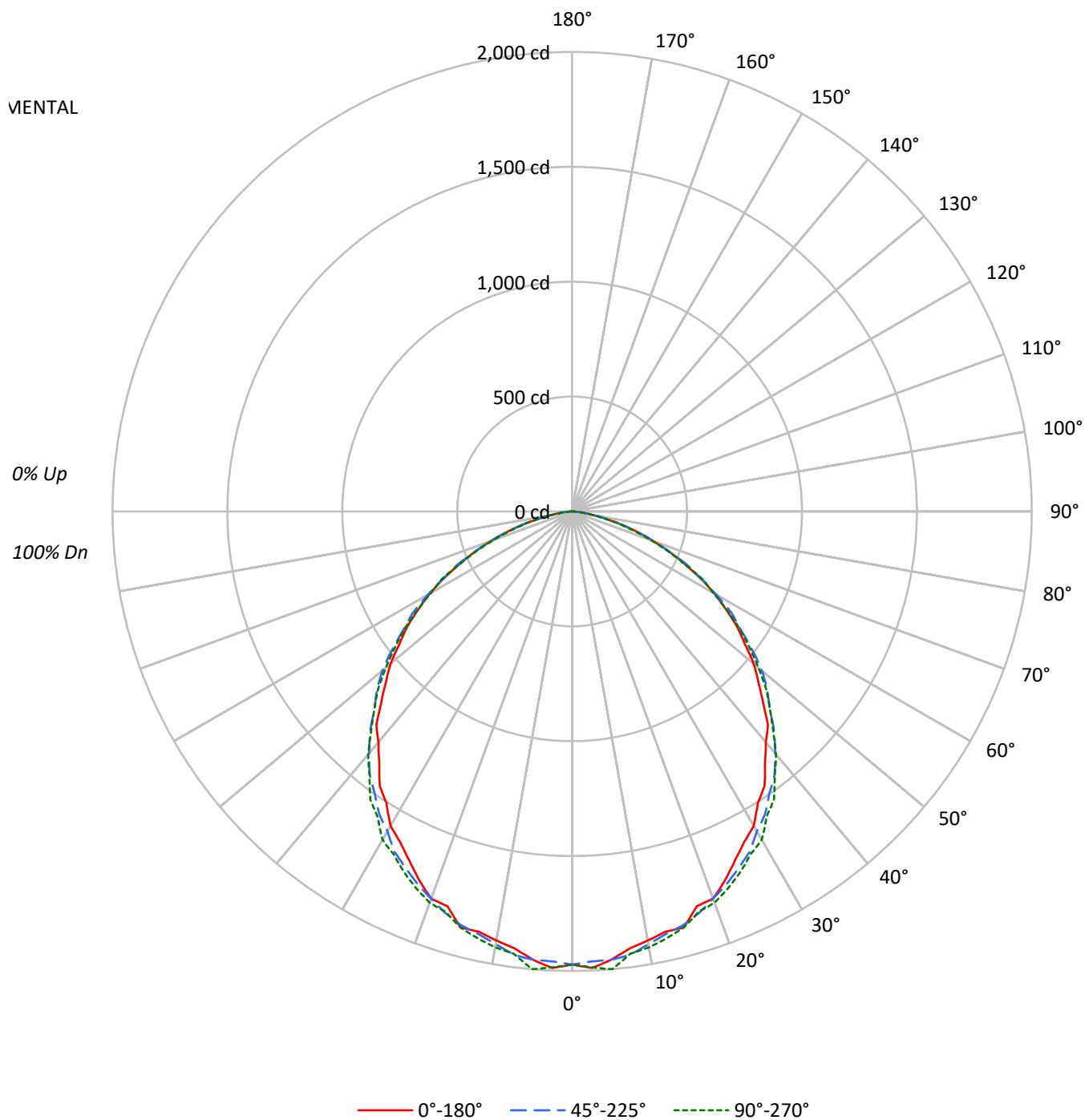
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590841

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	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°	5307	5307	5307
5°	5289	5291	5403
10°	5182	5227	5264
15°	5223	5194	5224
20°	5135	5135	5189
25°	4977	5086	5141
30°	4908	4995	5127
35°	4793	4918	5028
40°	4606	4828	4849
45°	4467	4626	4633
50°	4320	4515	4429
55°	4116	4197	4167
60°	3849	3887	3817
65°	3432	3520	3408
70°	2945	2955	2873
75°	2332	2327	2236
80°	1562	1519	1460
85°	849	840	787

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 4745 cd/sqm

TEST NUMBER: P590841

CATALOG NUMBER: FSR-24-2-LD4-4LO-40-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.5	3.7
10°-20°	525.7	10.6
20°-30°	787.6	15.8
30°-40°	933.5	18.8
40°-50°	935.2	18.8
50°-60°	793.9	16.0
60°-70°	535.2	10.8
70°-80°	235.2	4.7
80°-90°	38.2	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°	1498.8	30.2
0°-40°	2432.3	48.9
0°-60°	4161.4	83.7
0°-90°	4970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1972	1972	1972	1972	1972	
5°	1958	1953	1959	1953	2000	185
15°	1875	1853	1864	1874	1875	522
25°	1676	1685	1713	1735	1732	775
35°	1459	1463	1497	1532	1531	906
45°	1174	1196	1216	1247	1217	908
55°	877	872	894	888	888	780
65°	539	532	553	532	535	536
75°	224	220	224	208	215	240
85°	28	27	27	26	26	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1972.0	1972.0	1972.0	1972.0	1972.0
2.5°	1989.0	1974.0	1960.0	1976.3	1986.2
5°	1958.0	1953.4	1958.7	1952.9	2000.0
7.5°	1917.7	1935.3	1945.5	1939.1	1941.9
10°	1896.4	1890.2	1912.9	1928.7	1926.4
12.5°	1873.4	1882.6	1883.9	1900.9	1902.5
15°	1874.7	1853.1	1864.5	1874.2	1875.0
17.5°	1801.9	1825.3	1833.2	1855.4	1827.9
20°	1793.0	1775.9	1793.0	1815.6	1812.1
22.5°	1738.2	1719.1	1755.8	1775.9	1774.6
25°	1676.1	1685.3	1712.8	1735.2	1731.6
27.5°	1621.6	1632.3	1671.5	1702.3	1682.5
30°	1579.6	1574.3	1607.4	1634.9	1650.1
32.5°	1504.5	1523.9	1562.6	1589.8	1575.3
35°	1458.9	1463.3	1497.1	1531.7	1530.7
37.5°	1379.2	1399.3	1447.0	1456.6	1447.7
40°	1311.3	1331.4	1374.4	1384.8	1380.5
42.5°	1261.1	1264.7	1301.6	1313.5	1294.4
45°	1173.8	1195.7	1215.5	1246.8	1217.3
47.5°	1099.4	1109.6	1152.4	1160.8	1145.2
50°	1031.9	1035.5	1078.5	1068.1	1057.9
52.5°	947.2	962.2	986.4	984.3	972.4
55°	877.4	871.5	894.5	888.3	888.1
57.5°	793.6	803.8	822.7	813.0	797.4
60°	715.2	715.5	722.3	711.4	709.3
62.5°	627.9	630.9	632.5	619.0	640.9
65°	539.0	531.9	552.8	531.6	535.2
67.5°	457.3	460.8	458.8	445.6	450.7
70°	374.3	378.9	375.6	360.5	365.1
72.5°	298.4	292.8	296.4	277.5	286.2
75°	224.3	219.7	223.8	208.0	215.1
77.5°	152.8	156.3	153.8	145.4	150.2
80°	100.8	98.0	98.0	93.2	94.2
82.5°	58.8	56.0	55.3	53.7	56.0
85°	27.5	26.7	27.2	26.5	25.5
87.5°	9.9	10.2	10.2	9.7	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)