

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: P590649

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590649
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-LD4-3STD-40-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4992.0 lumens
Efficiency: N/A
Efficacy: 99.8 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

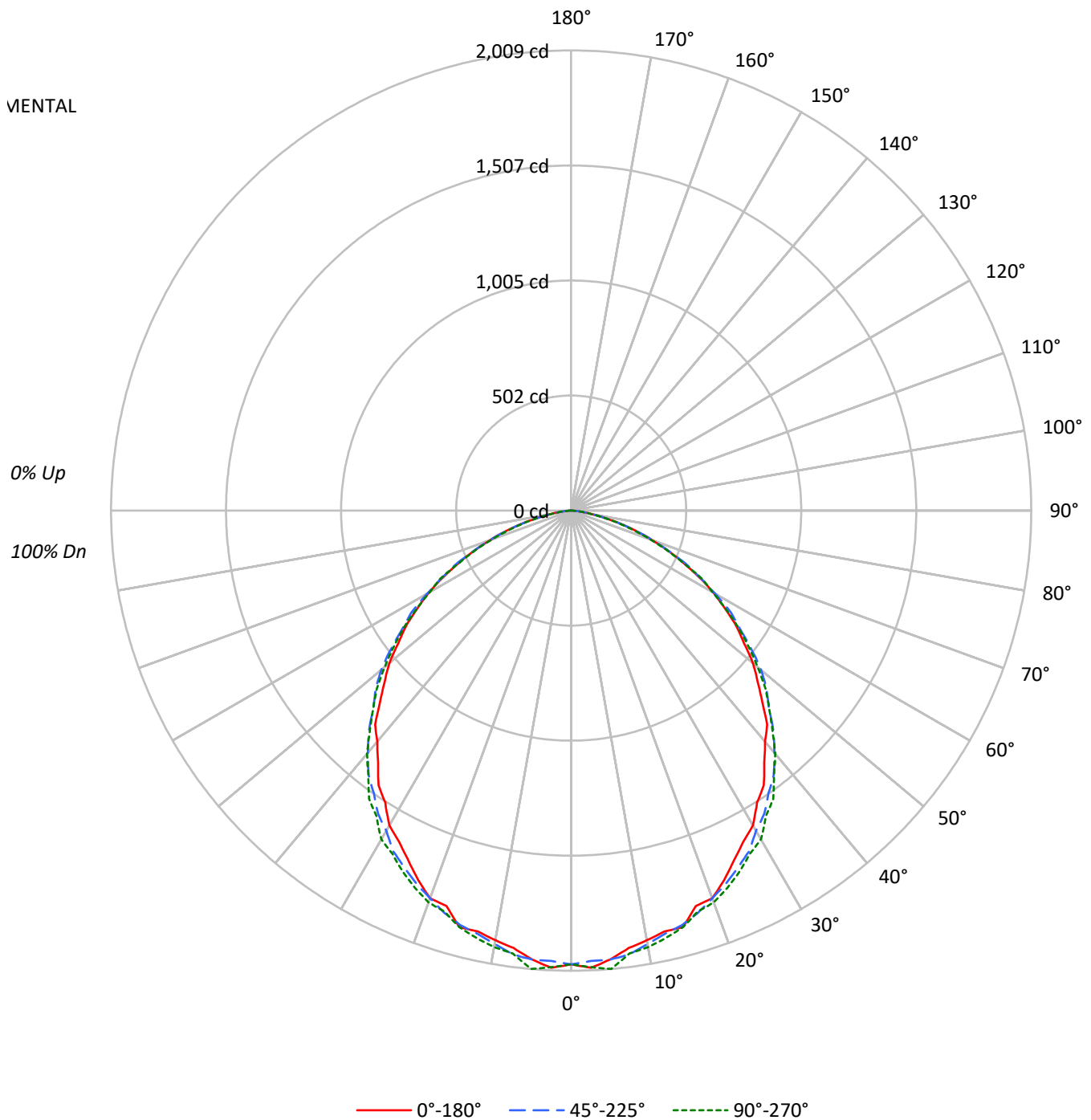
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5330	5330	5330
5°	5312	5314	5426
10°	5205	5250	5287
15°	5246	5217	5247
20°	5157	5157	5212
25°	4999	5108	5164
30°	4930	5017	5150
35°	4814	4940	5051
40°	4627	4849	4871
45°	4487	4646	4653
50°	4339	4535	4448
55°	4135	4215	4185
60°	3866	3905	3835
65°	3447	3535	3423
70°	2958	2968	2885
75°	2342	2337	2247
80°	1570	1526	1466
85°	852	846	790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4766 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.3	3.7
10°-20°	528.0	10.6
20°-30°	791.1	15.8
30°-40°	937.6	18.8
40°-50°	939.4	18.8
50°-60°	797.4	16.0
60°-70°	537.6	10.8
70°-80°	236.2	4.7
80°-90°	38.4	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°	1505.5	30.2
0°-40°	2443.1	48.9
0°-60°	4179.8	83.7
0°-90°	4992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1981	1981	1981	1981	1981	
5°	1967	1962	1967	1962	2009	185
15°	1883	1861	1873	1882	1883	525
25°	1684	1693	1720	1743	1739	778
35°	1465	1470	1504	1538	1538	910
45°	1179	1201	1221	1252	1223	912
55°	881	875	898	892	892	784
65°	541	534	555	534	538	538
75°	225	221	225	209	216	241
85°	28	27	27	27	26	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1980.7	1980.7	1980.7	1980.7	1980.7
2.5°	1997.8	1982.7	1968.7	1985.0	1995.0
5°	1966.6	1962.0	1967.4	1961.5	2008.8
7.5°	1926.2	1943.9	1954.1	1947.7	1950.5
10°	1904.7	1898.6	1921.4	1937.2	1934.9
12.5°	1881.7	1890.9	1892.2	1909.3	1910.9
15°	1883.0	1861.3	1872.8	1882.5	1883.3
17.5°	1809.9	1833.4	1841.3	1863.6	1836.0
20°	1800.9	1783.8	1800.9	1823.7	1820.1
22.5°	1745.9	1726.8	1763.6	1783.8	1782.5
25°	1683.5	1692.7	1720.4	1742.9	1739.3
27.5°	1628.8	1639.5	1678.9	1709.9	1689.9
30°	1586.6	1581.2	1614.5	1642.1	1657.4
32.5°	1511.2	1530.6	1569.5	1596.8	1582.3
35°	1465.4	1469.7	1503.7	1538.5	1537.5
37.5°	1385.3	1405.5	1453.4	1463.1	1454.1
40°	1317.1	1337.3	1380.5	1391.0	1386.6
42.5°	1266.7	1270.3	1307.3	1319.4	1300.2
45°	1179.0	1201.0	1220.9	1252.4	1222.7
47.5°	1104.3	1114.5	1157.5	1165.9	1150.3
50°	1036.5	1040.1	1083.3	1072.8	1062.6
52.5°	951.3	966.4	990.7	988.7	976.7
55°	881.3	875.4	898.4	892.3	892.0
57.5°	797.1	807.4	826.3	816.6	801.0
60°	718.4	718.6	725.5	714.5	712.5
62.5°	630.7	633.7	635.3	621.7	643.7
65°	541.4	534.2	555.2	534.0	537.6
67.5°	459.3	462.9	460.8	447.5	452.7
70°	375.9	380.5	377.2	362.1	366.7
72.5°	299.7	294.1	297.7	278.8	287.5
75°	225.3	220.7	224.8	208.9	216.1
77.5°	153.4	157.0	154.5	146.0	150.9
80°	101.3	98.5	98.5	93.6	94.6
82.5°	59.1	56.3	55.5	54.0	56.3
85°	27.6	26.9	27.4	26.6	25.6
87.5°	10.0	10.2	10.2	9.7	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)