

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: P590635

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590635
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-35-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5396.0 lumens
Efficiency: N/A
Efficacy: 107.9 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

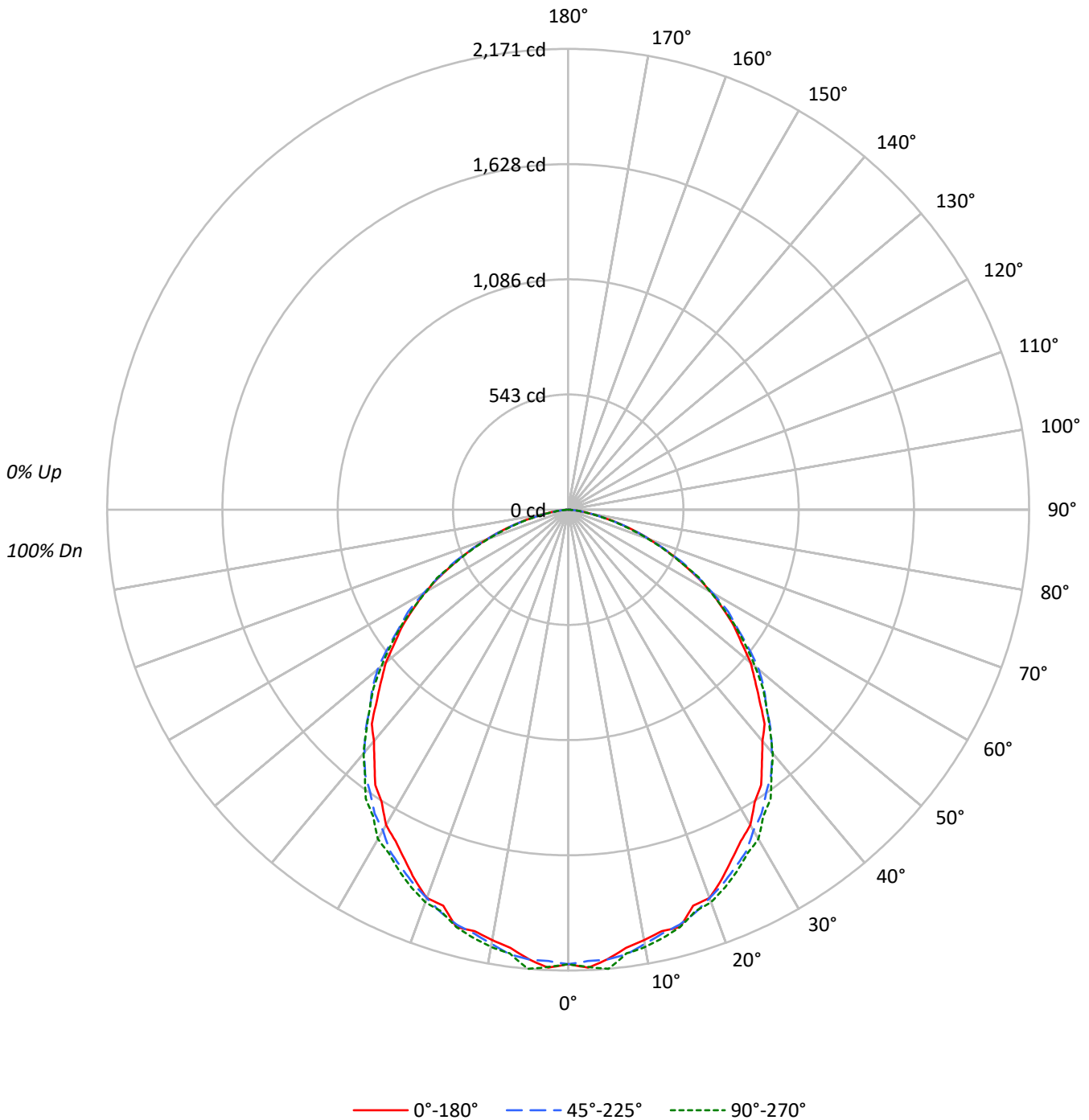
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5761	5761	5761
5°	5742	5744	5866
10°	5626	5675	5715
15°	5670	5640	5671
20°	5575	5575	5634
25°	5403	5521	5582
30°	5329	5423	5567
35°	5204	5340	5459
40°	5001	5242	5265
45°	4850	5022	5030
50°	4690	4902	4809
55°	4469	4556	4524
60°	4179	4221	4145
65°	3726	3821	3700
70°	3198	3208	3119
75°	2532	2527	2429
80°	1697	1649	1585
85°	923	914	852

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5152 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.4	3.7
10°-20°	570.8	10.6
20°-30°	855.1	15.8
30°-40°	1013.5	18.8
40°-50°	1015.4	18.8
50°-60°	861.9	16.0
60°-70°	581.1	10.8
70°-80°	255.3	4.7
80°-90°	41.5	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°	1627.3	30.2
0°-40°	2640.8	48.9
0°-60°	4518.1	83.7
0°-90°	5396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2141	2141	2141	2141	2141	
5°	2126	2121	2127	2120	2171	200
15°	2035	2012	2024	2035	2036	567
25°	1820	1830	1860	1884	1880	841
35°	1584	1589	1625	1663	1662	983
45°	1274	1298	1320	1354	1322	986
55°	953	946	971	964	964	847
65°	585	578	600	577	581	582
75°	244	239	243	226	234	261
85°	30	29	30	29	28	43
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2141.0	2141.0	2141.0	2141.0	2141.0
2.5°	2159.5	2143.2	2128.0	2145.7	2156.5
5°	2125.8	2120.8	2126.6	2120.3	2171.4
7.5°	2082.1	2101.2	2112.2	2105.3	2108.4
10°	2058.9	2052.3	2076.9	2094.0	2091.5
12.5°	2034.0	2044.0	2045.3	2063.9	2065.5
15°	2035.4	2011.9	2024.3	2034.8	2035.7
17.5°	1956.3	1981.8	1990.3	2014.4	1984.5
20°	1946.7	1928.1	1946.7	1971.3	1967.4
22.5°	1887.2	1866.5	1906.3	1928.1	1926.8
25°	1819.8	1829.7	1859.6	1883.9	1880.0
27.5°	1760.6	1772.2	1814.8	1848.3	1826.7
30°	1715.0	1709.2	1745.1	1775.0	1791.6
32.5°	1633.5	1654.5	1696.5	1726.1	1710.3
35°	1584.0	1588.7	1625.4	1663.0	1661.9
37.5°	1497.5	1519.3	1571.0	1581.5	1571.8
40°	1423.6	1445.5	1492.2	1503.5	1498.8
42.5°	1369.2	1373.1	1413.1	1426.1	1405.4
45°	1274.4	1298.1	1319.7	1353.7	1321.6
47.5°	1193.7	1204.7	1251.1	1260.3	1243.4
50°	1120.4	1124.3	1171.0	1159.6	1148.6
52.5°	1028.3	1044.7	1070.9	1068.7	1055.7
55°	952.6	946.2	971.1	964.5	964.2
57.5°	861.7	872.7	893.2	882.7	865.8
60°	776.5	776.8	784.2	772.4	770.2
62.5°	681.7	685.0	686.7	672.0	695.8
65°	585.2	577.5	600.1	577.2	581.1
67.5°	496.5	500.3	498.1	483.8	489.3
70°	406.4	411.3	407.7	391.4	396.4
72.5°	324.0	317.9	321.8	301.3	310.7
75°	243.5	238.6	243.0	225.8	233.6
77.5°	165.9	169.7	167.0	157.8	163.1
80°	109.5	106.4	106.4	101.2	102.3
82.5°	63.9	60.8	60.0	58.3	60.8
85°	29.9	29.0	29.6	28.7	27.6
87.5°	10.8	11.1	11.1	10.5	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)