

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: P590822

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590822
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-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

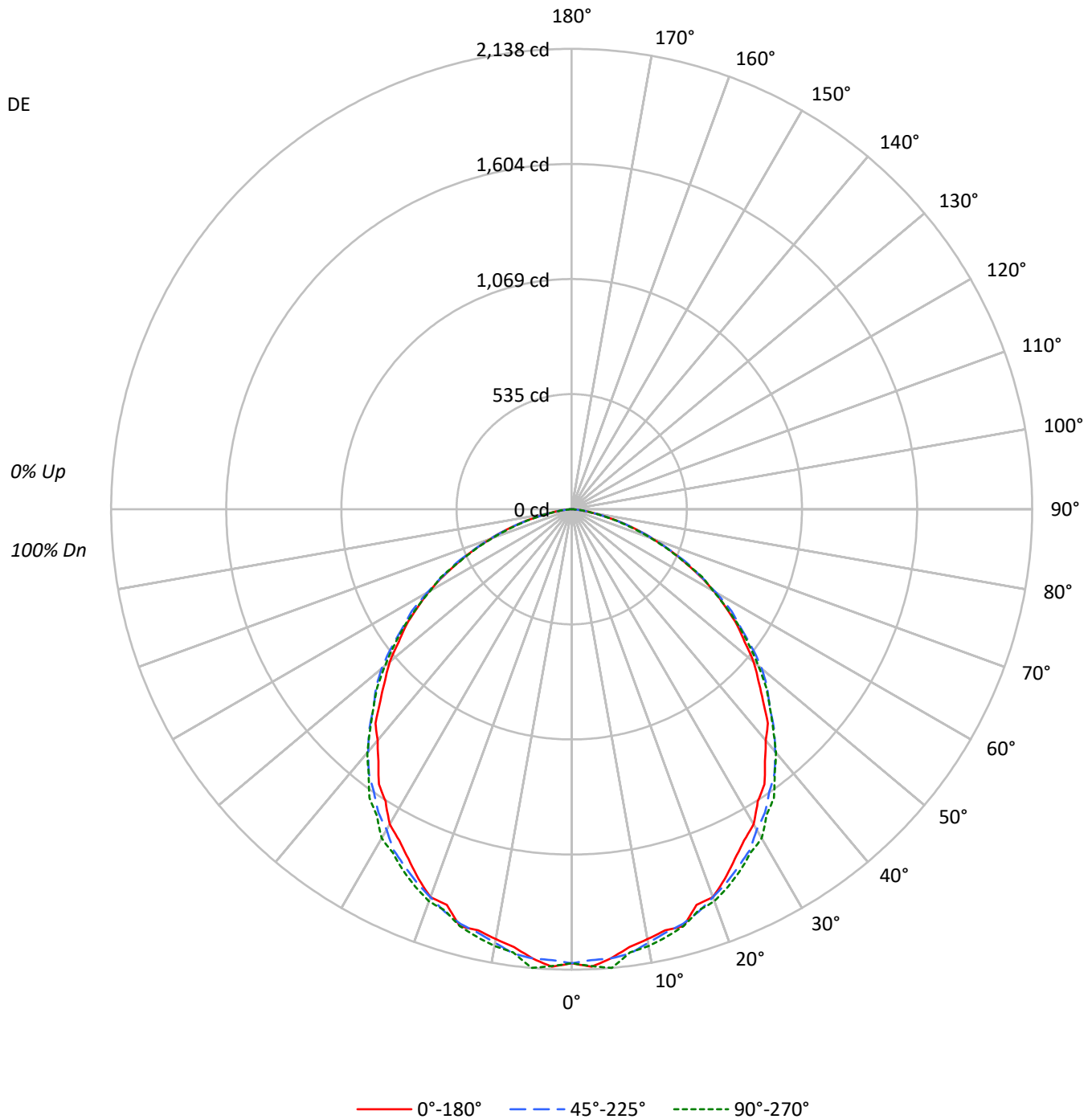
Lumens per Lamp: N/A
Luminaire Lumens: 5313.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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



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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°	5673	5673	5673
5°	5654	5656	5775
10°	5539	5588	5627
15°	5583	5553	5584
20°	5489	5489	5547
25°	5320	5437	5496
30°	5247	5339	5481
35°	5123	5257	5376
40°	4924	5161	5184
45°	4775	4945	4952
50°	4618	4827	4734
55°	4400	4486	4454
60°	4115	4156	4081
65°	3669	3762	3643
70°	3148	3159	3071
75°	2493	2487	2391
80°	1671	1624	1561
85°	908	898	840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5073 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.3	3.7
10°-20°	562.0	10.6
20°-30°	842.0	15.8
30°-40°	997.9	18.8
40°-50°	999.8	18.8
50°-60°	848.6	16.0
60°-70°	572.2	10.8
70°-80°	251.4	4.7
80°-90°	40.9	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°	1602.3	30.2
0°-40°	2600.2	48.9
0°-60°	4448.6	83.7
0°-90°	5313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2108	2108	2108	2108	2108	
5°	2093	2088	2094	2088	2138	197
15°	2004	1981	1993	2004	2004	558
25°	1792	1802	1831	1855	1851	828
35°	1560	1564	1600	1638	1636	968
45°	1255	1278	1299	1333	1301	971
55°	938	932	956	950	949	834
65°	576	569	591	568	572	573
75°	240	235	239	222	230	257
85°	29	29	29	28	27	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2108.1	2108.1	2108.1	2108.1	2108.1
2.5°	2126.3	2110.2	2095.3	2112.7	2123.3
5°	2093.1	2088.2	2093.9	2087.7	2138.0
7.5°	2050.1	2068.9	2079.8	2073.0	2075.9
10°	2027.2	2020.7	2044.9	2061.8	2059.3
12.5°	2002.7	2012.5	2013.9	2032.1	2033.8
15°	2004.1	1981.0	1993.2	2003.5	2004.4
17.5°	1926.2	1951.3	1959.7	1983.4	1954.0
20°	1916.7	1898.5	1916.7	1940.9	1937.1
22.5°	1858.2	1837.8	1877.0	1898.5	1897.1
25°	1791.8	1801.6	1831.0	1854.9	1851.1
27.5°	1733.5	1745.0	1786.9	1819.8	1798.6
30°	1688.6	1682.9	1718.3	1747.7	1764.0
32.5°	1608.3	1629.0	1670.4	1699.5	1684.0
35°	1559.6	1564.2	1600.4	1637.5	1636.4
37.5°	1474.4	1495.9	1546.8	1557.2	1547.6
40°	1401.7	1423.2	1469.2	1480.4	1475.8
42.5°	1348.1	1351.9	1391.4	1404.2	1383.8
45°	1254.8	1278.2	1299.4	1332.9	1301.3
47.5°	1175.3	1186.2	1231.9	1240.9	1224.3
50°	1103.2	1107.0	1153.0	1141.8	1130.9
52.5°	1012.5	1028.6	1054.4	1052.3	1039.5
55°	937.9	931.7	956.2	949.6	949.4
57.5°	848.4	859.3	879.4	869.1	852.5
60°	764.6	764.8	772.2	760.5	758.3
62.5°	671.2	674.5	676.1	661.7	685.1
65°	576.2	568.6	590.9	568.3	572.1
67.5°	488.8	492.7	490.5	476.3	481.8
70°	400.1	405.0	401.5	385.4	390.3
72.5°	319.0	313.0	316.8	296.7	305.9
75°	239.8	234.9	239.2	222.4	230.0
77.5°	163.3	167.1	164.4	155.4	160.6
80°	107.8	104.8	104.8	99.6	100.7
82.5°	62.9	59.9	59.1	57.4	59.9
85°	29.4	28.6	29.1	28.3	27.2
87.5°	10.6	10.9	10.9	10.3	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)