

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: P590623

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590623
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-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5389.0 lumens
Efficiency: N/A
Efficacy: 107.8 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

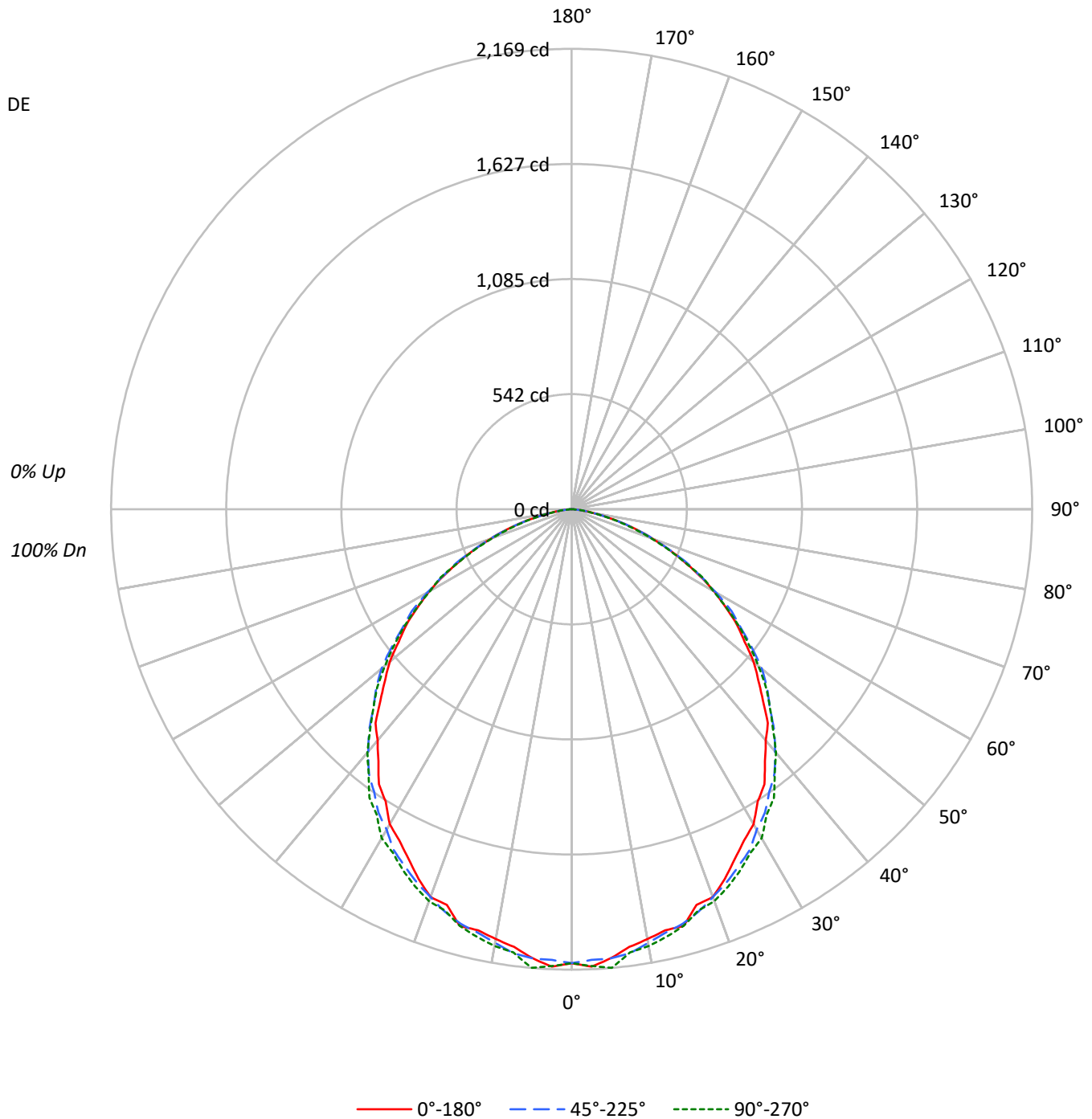
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5754	5754	5754
5°	5735	5737	5858
10°	5619	5668	5708
15°	5663	5632	5664
20°	5567	5567	5627
25°	5396	5514	5575
30°	5322	5416	5560
35°	5197	5333	5453
40°	4995	5235	5258
45°	4843	5016	5023
50°	4684	4896	4802
55°	4464	4550	4518
60°	4174	4215	4140
65°	3722	3817	3695
70°	3193	3204	3115
75°	2529	2523	2426
80°	1694	1647	1582
85°	920	911	852

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5145 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.1	3.7
10°-20°	570.0	10.6
20°-30°	854.0	15.8
30°-40°	1012.2	18.8
40°-50°	1014.1	18.8
50°-60°	860.8	16.0
60°-70°	580.3	10.8
70°-80°	255.0	4.7
80°-90°	41.4	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°	1625.2	30.2
0°-40°	2637.4	48.9
0°-60°	4512.2	83.7
0°-90°	5389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2138	2138	2138	2138	2138	
5°	2123	2118	2124	2118	2169	200
15°	2033	2009	2022	2032	2033	566
25°	1817	1827	1857	1882	1878	840
35°	1582	1587	1623	1661	1660	982
45°	1273	1296	1318	1352	1320	985
55°	951	945	970	963	963	846
65°	584	577	599	576	580	581
75°	243	238	243	226	233	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°	2138.2	2138.2	2138.2	2138.2	2138.2
2.5°	2156.7	2140.4	2125.2	2142.9	2153.7
5°	2123.0	2118.1	2123.9	2117.5	2168.6
7.5°	2079.4	2098.5	2109.5	2102.6	2105.6
10°	2056.2	2049.6	2074.2	2091.3	2088.8
12.5°	2031.4	2041.3	2042.7	2061.2	2062.8
15°	2032.8	2009.3	2021.7	2032.2	2033.0
17.5°	1953.8	1979.2	1987.8	2011.8	1982.0
20°	1944.1	1925.6	1944.1	1968.7	1964.8
22.5°	1884.8	1864.1	1903.8	1925.6	1924.3
25°	1817.4	1827.4	1857.2	1881.5	1877.6
27.5°	1758.3	1769.9	1812.4	1845.9	1824.3
30°	1712.8	1707.0	1742.9	1772.7	1789.3
32.5°	1631.3	1652.3	1694.3	1723.8	1708.1
35°	1581.9	1586.6	1623.3	1660.9	1659.8
37.5°	1495.5	1517.3	1568.9	1579.4	1569.8
40°	1421.8	1443.6	1490.3	1501.6	1496.9
42.5°	1367.4	1371.3	1411.3	1424.3	1403.6
45°	1272.7	1296.5	1318.0	1352.0	1319.9
47.5°	1192.1	1203.1	1249.5	1258.6	1241.8
50°	1118.9	1122.8	1169.5	1158.1	1147.1
52.5°	1027.0	1043.3	1069.5	1067.3	1054.3
55°	951.4	945.0	969.9	963.2	963.0
57.5°	860.5	871.6	892.0	881.5	864.7
60°	775.5	775.8	783.2	771.4	769.2
62.5°	680.8	684.1	685.8	671.1	694.9
65°	584.5	576.7	599.4	576.4	580.3
67.5°	495.8	499.7	497.5	483.1	488.7
70°	405.8	410.8	407.2	390.9	395.9
72.5°	323.6	317.5	321.4	300.9	310.3
75°	243.2	238.3	242.7	225.6	233.3
77.5°	165.6	169.5	166.8	157.6	162.9
80°	109.3	106.3	106.3	101.0	102.1
82.5°	63.8	60.7	59.9	58.3	60.7
85°	29.8	29.0	29.5	28.7	27.6
87.5°	10.8	11.0	11.0	10.5	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)