

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: P590654

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590654
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-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5505.0 lumens
Efficiency: N/A
Efficacy: 110.1 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

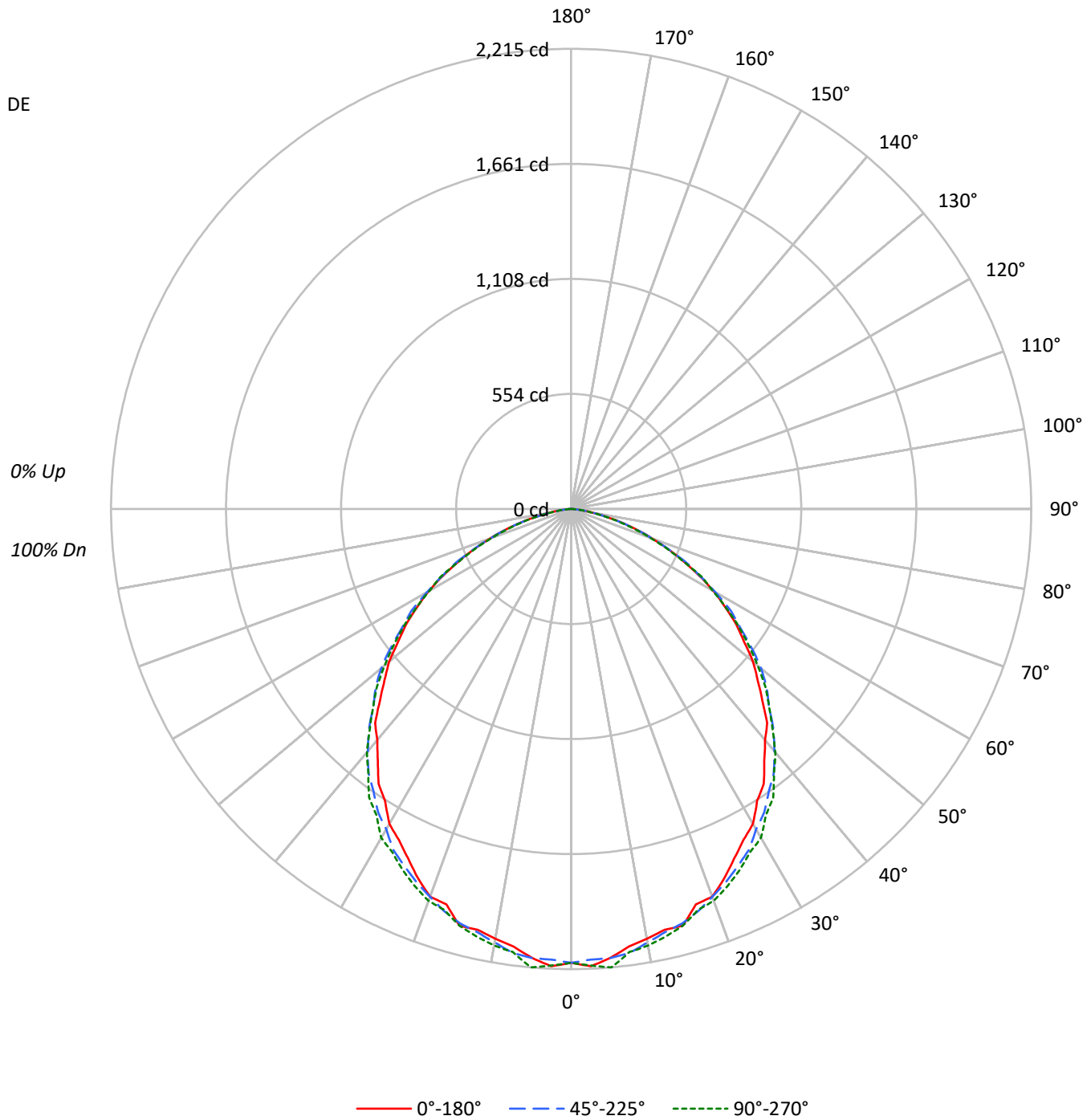
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5878	5878	5878
5°	5858	5861	5984
10°	5740	5790	5831
15°	5785	5753	5786
20°	5687	5687	5748
25°	5512	5633	5695
30°	5437	5532	5679
35°	5309	5448	5570
40°	5102	5348	5371
45°	4948	5124	5131
50°	4785	5001	4906
55°	4559	4648	4615
60°	4264	4306	4229
65°	3801	3899	3775
70°	3262	3273	3182
75°	2584	2577	2478
80°	1731	1683	1616
85°	942	932	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5256 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.5	3.7
10°-20°	582.3	10.6
20°-30°	872.4	15.8
30°-40°	1034.0	18.8
40°-50°	1035.9	18.8
50°-60°	879.3	16.0
60°-70°	592.8	10.8
70°-80°	260.5	4.7
80°-90°	42.3	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°	1660.2	30.2
0°-40°	2694.2	48.9
0°-60°	4609.4	83.7
0°-90°	5505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2184	2184	2184	2184	2184	
5°	2169	2164	2170	2163	2215	204
15°	2076	2052	2065	2076	2077	579
25°	1856	1867	1897	1922	1918	858
35°	1616	1621	1658	1697	1696	1003
45°	1300	1324	1346	1381	1348	1006
55°	972	965	991	984	984	864
65°	597	589	612	589	593	594
75°	248	243	248	230	238	266
85°	30	30	30	29	28	44
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2184.2	2184.2	2184.2	2184.2	2184.2
2.5°	2203.1	2186.5	2171.0	2189.0	2200.0
5°	2168.7	2163.7	2169.6	2163.1	2215.3
7.5°	2124.2	2143.6	2154.9	2147.9	2151.0
10°	2100.5	2093.7	2118.8	2136.3	2133.8
12.5°	2075.1	2085.3	2086.7	2105.6	2107.3
15°	2076.5	2052.5	2065.2	2075.9	2076.8
17.5°	1995.9	2021.8	2030.5	2055.1	2024.6
20°	1986.0	1967.1	1986.0	2011.1	2007.1
22.5°	1925.4	1904.2	1944.8	1967.1	1965.7
25°	1856.5	1866.7	1897.1	1922.0	1918.0
27.5°	1796.2	1808.0	1851.5	1885.6	1863.6
30°	1749.7	1743.7	1780.4	1810.9	1827.8
32.5°	1666.5	1687.9	1730.8	1760.9	1744.9
35°	1616.0	1620.8	1658.3	1696.6	1695.5
37.5°	1527.7	1550.0	1602.7	1613.4	1603.6
40°	1452.4	1474.7	1522.3	1533.9	1529.1
42.5°	1396.8	1400.8	1441.7	1454.9	1433.8
45°	1300.1	1324.4	1346.4	1381.1	1348.3
47.5°	1217.8	1229.0	1276.4	1285.7	1268.5
50°	1143.0	1147.0	1194.6	1183.1	1171.8
52.5°	1049.1	1065.8	1092.5	1090.3	1077.0
55°	971.8	965.4	990.7	984.0	983.7
57.5°	879.1	890.3	911.2	900.5	883.3
60°	792.2	792.5	800.1	788.0	785.7
62.5°	695.5	698.8	700.5	685.6	709.8
65°	597.0	589.1	612.3	588.9	592.8
67.5°	506.5	510.5	508.2	493.5	499.2
70°	414.6	419.6	416.0	399.3	404.4
72.5°	330.5	324.3	328.3	307.4	317.0
75°	248.5	243.4	247.9	230.4	238.3
77.5°	169.2	173.2	170.3	161.0	166.4
80°	111.7	108.6	108.6	103.2	104.3
82.5°	65.1	62.0	61.2	59.5	62.0
85°	30.5	29.6	30.2	29.3	28.2
87.5°	11.0	11.3	11.3	10.7	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)