

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: P590661

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590661
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5498.0 lumens
Efficiency: N/A
Efficacy: 110.0 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

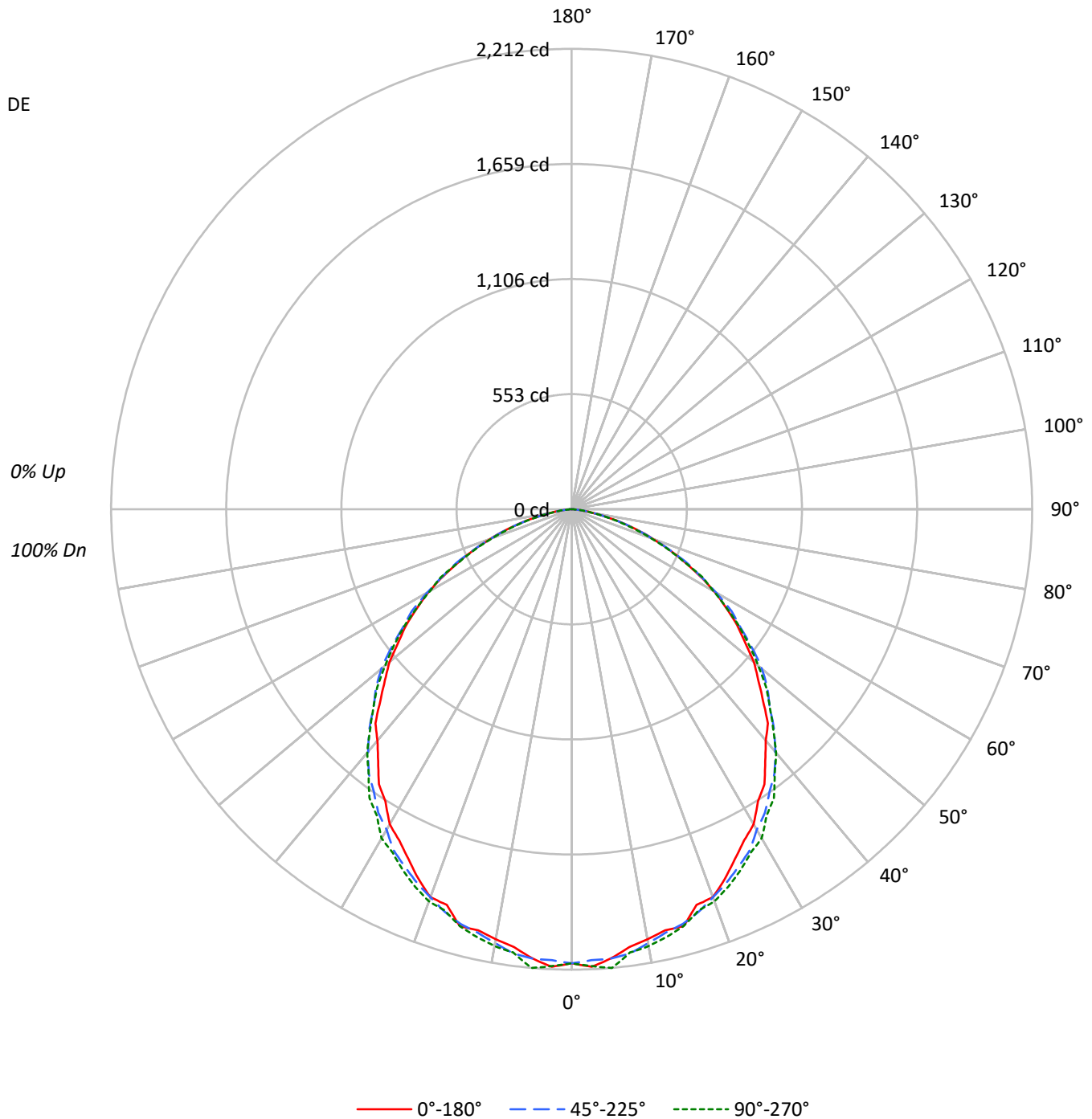
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5870	5870	5870
5°	5851	5853	5977
10°	5732	5782	5823
15°	5778	5746	5779
20°	5680	5680	5741
25°	5505	5626	5688
30°	5430	5525	5672
35°	5302	5441	5563
40°	5096	5341	5365
45°	4942	5117	5125
50°	4779	4995	4899
55°	4554	4642	4609
60°	4258	4301	4223
65°	3797	3894	3770
70°	3257	3269	3178
75°	2580	2574	2475
80°	1728	1680	1615
85°	939	929	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5249 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.2	3.7
10°-20°	581.6	10.6
20°-30°	871.3	15.8
30°-40°	1032.7	18.8
40°-50°	1034.6	18.8
50°-60°	878.2	16.0
60°-70°	592.1	10.8
70°-80°	260.2	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°	1658.1	30.2
0°-40°	2690.7	48.9
0°-60°	4603.5	83.7
0°-90°	5498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5498.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2182	2182	2182	2182	2182	
5°	2166	2161	2167	2160	2212	204
15°	2074	2050	2063	2073	2074	578
25°	1854	1864	1895	1920	1916	857
35°	1614	1619	1656	1694	1693	1002
45°	1298	1323	1345	1379	1347	1004
55°	971	964	990	983	982	863
65°	596	588	612	588	592	593
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°	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2200.3	2183.7	2168.2	2186.3	2197.2
5°	2166.0	2160.9	2166.8	2160.3	2212.5
7.5°	2121.5	2140.9	2152.2	2145.1	2148.2
10°	2097.8	2091.1	2116.1	2133.6	2131.1
12.5°	2072.5	2082.6	2084.0	2102.9	2104.6
15°	2073.9	2049.9	2062.6	2073.3	2074.2
17.5°	1993.3	2019.2	2028.0	2052.5	2022.0
20°	1983.5	1964.6	1983.5	2008.5	2004.6
22.5°	1922.9	1901.8	1942.3	1964.6	1963.2
25°	1854.2	1864.3	1894.7	1919.5	1915.6
27.5°	1793.9	1805.7	1849.1	1883.2	1861.2
30°	1747.4	1741.5	1778.1	1808.5	1825.4
32.5°	1664.3	1685.7	1728.6	1758.7	1742.6
35°	1613.9	1618.7	1656.2	1694.5	1693.3
37.5°	1525.8	1548.0	1600.7	1611.4	1601.5
40°	1450.6	1472.8	1520.4	1532.0	1527.2
42.5°	1395.1	1399.0	1439.9	1453.1	1432.0
45°	1298.5	1322.7	1344.7	1379.3	1346.6
47.5°	1216.2	1227.5	1274.8	1284.1	1266.9
50°	1141.6	1145.5	1193.1	1181.6	1170.3
52.5°	1047.8	1064.4	1091.2	1088.9	1075.7
55°	970.6	964.1	989.5	982.7	982.4
57.5°	877.9	889.2	910.0	899.3	882.2
60°	791.2	791.5	799.1	787.0	784.7
62.5°	694.6	698.0	699.6	684.7	708.9
65°	596.3	588.4	611.5	588.1	592.1
67.5°	505.9	509.8	507.6	492.9	498.5
70°	414.0	419.1	415.5	398.8	403.9
72.5°	330.1	323.9	327.9	307.0	316.6
75°	248.1	243.1	247.6	230.1	238.0
77.5°	169.0	172.9	170.1	160.8	166.2
80°	111.5	108.4	108.4	103.1	104.2
82.5°	65.1	62.0	61.1	59.4	62.0
85°	30.4	29.6	30.1	29.3	28.2
87.5°	11.0	11.3	11.3	10.7	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)