

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: P562051

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562051
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1HI-40-UNV-81-85-EDD
Description: 2X4 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: 4502.0 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

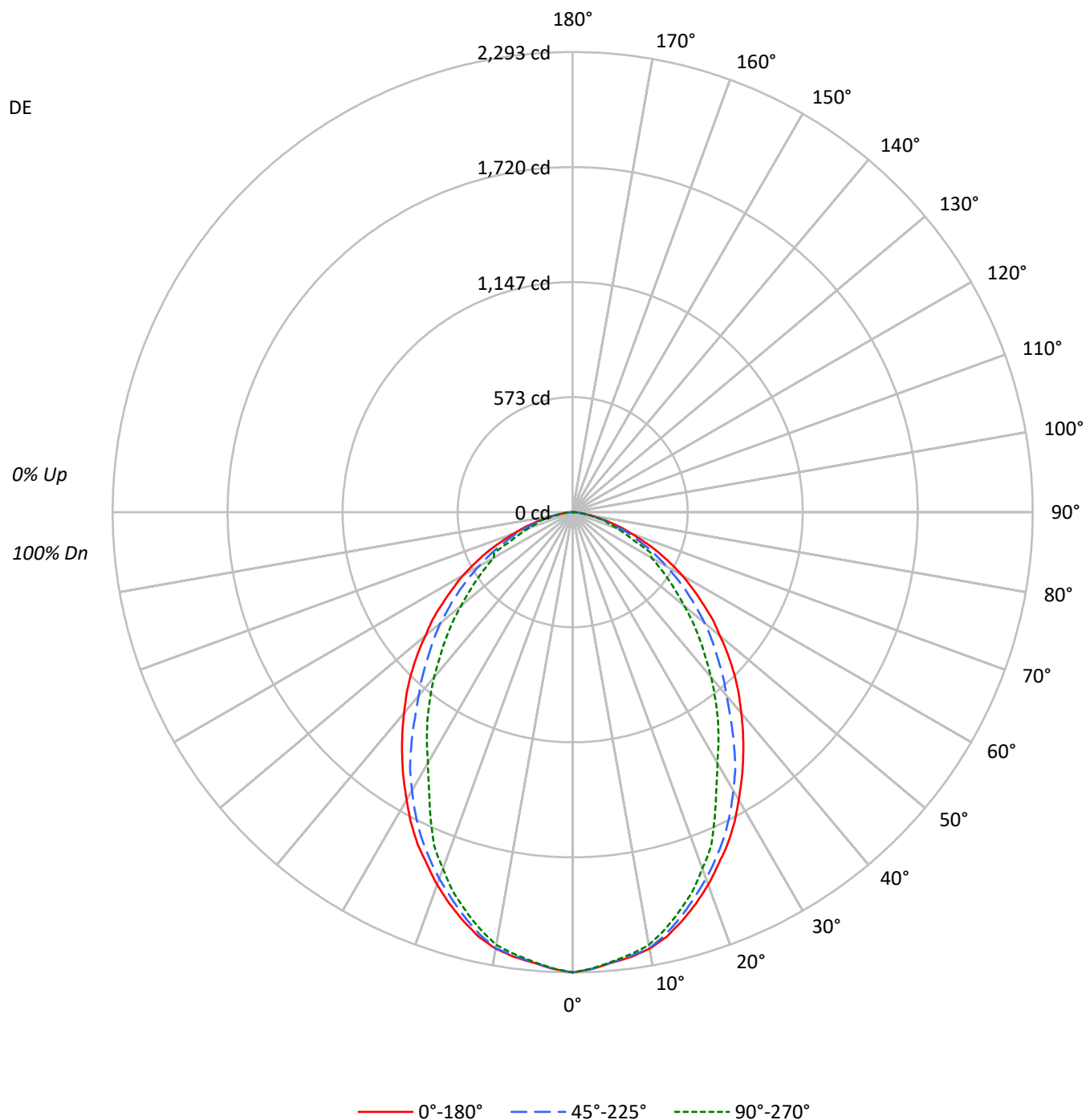
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87		87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75		75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65		65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56		56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50		50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44		44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40		40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36		36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33		33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3086	3086	3086
5°	3044	3040	3036
10°	3017	3014	2992
15°	2936	2906	2866
20°	2828	2782	2707
25°	2712	2653	2487
30°	2570	2488	2241
35°	2434	2299	2073
40°	2296	2095	1886
45°	2164	1937	1705
50°	2003	1798	1521
55°	1853	1629	1362
60°	1698	1455	1220
65°	1494	1274	1080
70°	1231	1116	918
75°	978	855	896
80°	657	616	575
85°	409	491	573

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2164 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.5	4.7
10°-20°	585.9	13.0
20°-30°	811.1	18.0
30°-40°	864.8	19.2
40°-50°	789.0	17.5
50°-60°	618.1	13.7
60°-70°	402.8	8.9
70°-80°	178.5	4.0
80°-90°	38.3	0.9
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°	1610.4	35.8
0°-40°	2475.2	55.0
0°-60°	3882.3	86.2
0°-90°	4502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4502.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2293	2293	2293	2293	2293	
5°	2254	2251	2251	2248	2248	214
15°	2108	2108	2086	2065	2057	593
25°	1827	1816	1787	1723	1676	839
35°	1482	1471	1400	1294	1262	927
45°	1137	1114	1018	933	896	876
55°	790	766	695	612	581	709
65°	469	443	400	408	339	462
75°	188	175	164	156	172	202
85°	26	29	32	34	37	37
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2293.3	2293.3	2293.3	2293.3	2293.3
2.5°	2277.4	2277.4	2277.4	2274.7	2274.7
5°	2253.5	2250.8	2250.8	2248.2	2248.2
7.5°	2234.9	2232.3	2229.6	2227.0	2221.7
10°	2208.4	2208.4	2205.8	2192.5	2189.9
12.5°	2166.0	2163.4	2152.7	2134.2	2128.9
15°	2107.7	2107.7	2086.5	2065.3	2057.3
17.5°	2044.0	2041.4	2014.9	1993.7	1983.1
20°	1975.1	1969.8	1943.3	1908.8	1890.3
22.5°	1898.2	1898.2	1866.4	1821.4	1802.8
25°	1826.7	1816.0	1786.9	1723.3	1675.5
27.5°	1744.5	1728.6	1696.7	1606.6	1550.9
30°	1654.3	1646.4	1601.3	1484.7	1442.2
32.5°	1569.5	1556.2	1508.5	1386.6	1352.1
35°	1482.0	1471.4	1399.8	1293.8	1262.0
37.5°	1394.5	1381.3	1291.1	1206.3	1166.5
40°	1307.0	1291.1	1193.0	1116.1	1073.7
42.5°	1224.8	1203.6	1108.2	1026.0	978.3
45°	1137.4	1113.5	1018.0	933.2	896.1
47.5°	1049.9	1028.7	941.2	853.7	811.3
50°	957.1	938.5	859.0	771.5	726.4
52.5°	880.2	851.0	774.1	686.7	649.5
55°	790.0	766.2	694.6	612.4	580.6
57.5°	707.9	684.0	617.7	540.8	514.3
60°	631.0	596.5	540.8	474.6	453.3
62.5°	546.1	519.6	471.9	416.2	442.7
65°	469.3	442.7	400.3	408.3	339.3
67.5°	384.4	371.2	334.0	296.9	286.3
70°	312.8	296.9	283.7	243.9	233.3
72.5°	249.2	233.3	214.7	193.5	185.6
75°	188.2	175.0	164.4	156.4	172.3
77.5°	129.9	124.6	116.7	108.7	106.0
80°	84.8	82.2	79.5	76.9	74.2
82.5°	50.4	50.4	50.4	50.4	50.4
85°	26.5	29.2	31.8	34.5	37.1
87.5°	15.9	15.9	18.6	21.2	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)