

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: P562073

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562073
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-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3796.0 lumens
Efficiency: N/A
Efficacy: 87.9 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

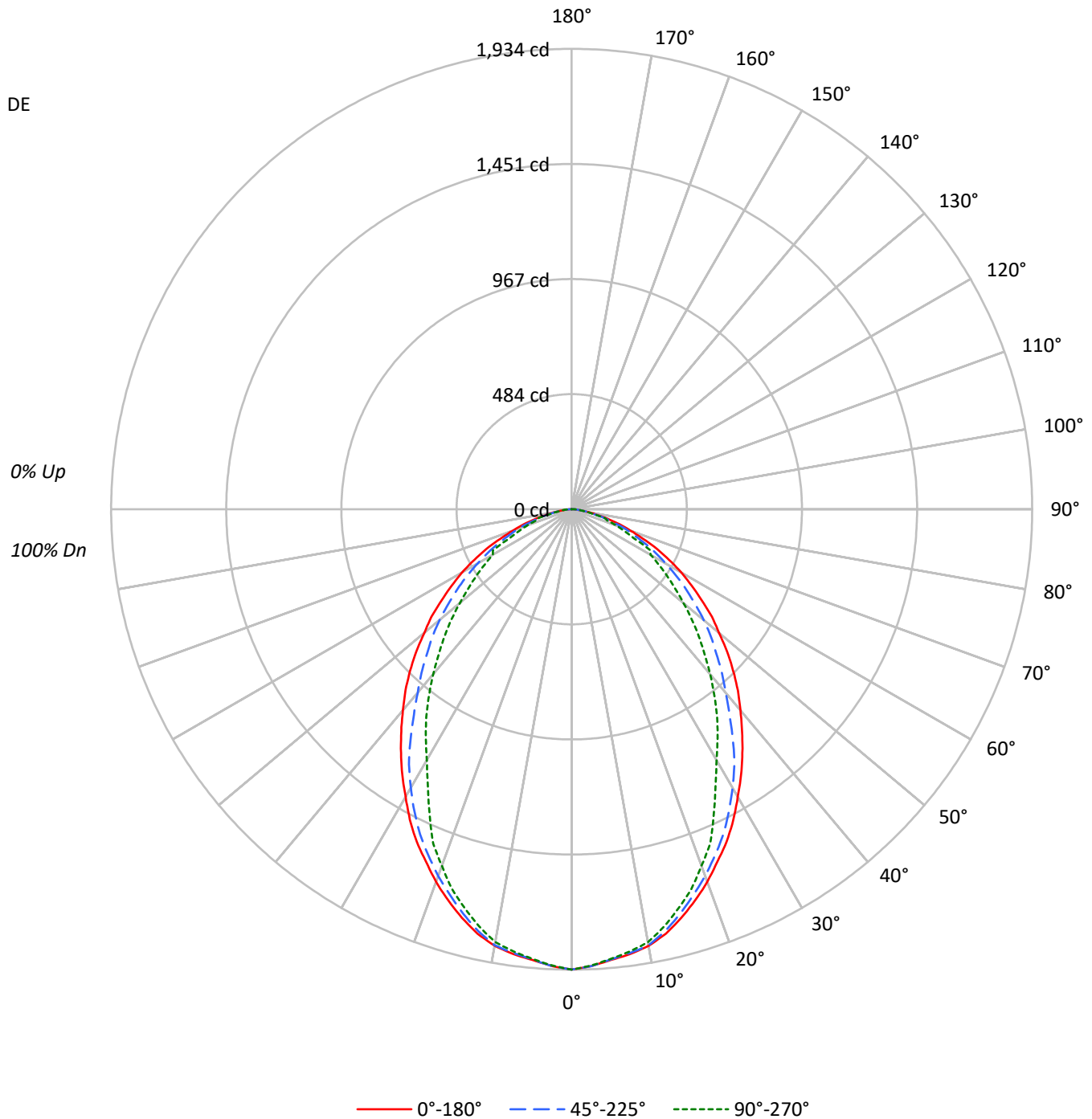
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562073

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2602	2602	2602
5°	2566	2563	2560
10°	2544	2541	2523
15°	2476	2451	2416
20°	2385	2346	2282
25°	2287	2237	2097
30°	2167	2098	1889
35°	2053	1939	1748
40°	1936	1767	1590
45°	1825	1633	1438
50°	1689	1516	1282
55°	1563	1374	1148
60°	1432	1227	1029
65°	1260	1074	911
70°	1038	941	774
75°	825	721	755
80°	554	520	485
85°	346	414	483

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1825 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.0	4.7
10°-20°	494.0	13.0
20°-30°	683.9	18.0
30°-40°	729.2	19.2
40°-50°	665.3	17.5
50°-60°	521.2	13.7
60°-70°	339.7	8.9
70°-80°	150.5	4.0
80°-90°	32.3	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°	1357.9	35.8
0°-40°	2087.1	55.0
0°-60°	3273.5	86.2
0°-90°	3796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1934	1934	1934	1934	1934	
5°	1900	1898	1898	1896	1896	180
15°	1777	1777	1759	1741	1735	500
25°	1540	1531	1507	1453	1413	707
35°	1250	1241	1180	1091	1064	781
45°	959	939	858	787	756	739
55°	666	646	586	516	490	598
65°	396	373	338	344	286	390
75°	159	148	139	132	145	170
85°	22	25	27	29	31	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1933.6	1933.6	1933.6	1933.6	1933.6
2.5°	1920.2	1920.2	1920.2	1918.0	1918.0
5°	1900.1	1897.9	1897.9	1895.6	1895.6
7.5°	1884.5	1882.2	1880.0	1877.7	1873.3
10°	1862.1	1862.1	1859.9	1848.7	1846.5
12.5°	1826.3	1824.1	1815.2	1799.5	1795.0
15°	1777.2	1777.2	1759.3	1741.4	1734.7
17.5°	1723.5	1721.3	1698.9	1681.0	1672.1
20°	1665.4	1660.9	1638.6	1609.5	1593.8
22.5°	1600.6	1600.6	1573.7	1535.7	1520.1
25°	1540.2	1531.3	1506.7	1453.0	1412.8
27.5°	1470.9	1457.5	1430.7	1354.7	1307.7
30°	1394.9	1388.2	1350.2	1251.8	1216.1
32.5°	1323.4	1312.2	1271.9	1169.1	1140.1
35°	1249.6	1240.7	1180.3	1090.9	1064.1
37.5°	1175.8	1164.6	1088.6	1017.1	983.6
40°	1102.1	1088.6	1005.9	941.1	905.3
42.5°	1032.8	1014.9	934.4	865.1	824.9
45°	959.0	938.9	858.4	786.9	755.6
47.5°	885.2	867.3	793.6	719.8	684.0
50°	807.0	791.3	724.3	650.5	612.5
52.5°	742.2	717.6	652.7	579.0	547.7
55°	666.2	646.0	585.7	516.4	489.6
57.5°	596.9	576.7	520.9	456.0	433.7
60°	532.0	503.0	456.0	400.1	382.3
62.5°	460.5	438.1	397.9	351.0	373.3
65°	395.7	373.3	337.5	344.3	286.1
67.5°	324.1	313.0	281.7	250.4	241.4
70°	263.8	250.4	239.2	205.7	196.7
72.5°	210.1	196.7	181.1	163.2	156.5
75°	158.7	147.5	138.6	131.9	145.3
77.5°	109.5	105.1	98.4	91.7	89.4
80°	71.5	69.3	67.1	64.8	62.6
82.5°	42.5	42.5	42.5	42.5	42.5
85°	22.4	24.6	26.8	29.1	31.3
87.5°	13.4	13.4	15.6	17.9	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)