

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: P562057

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562057
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 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: 3878.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

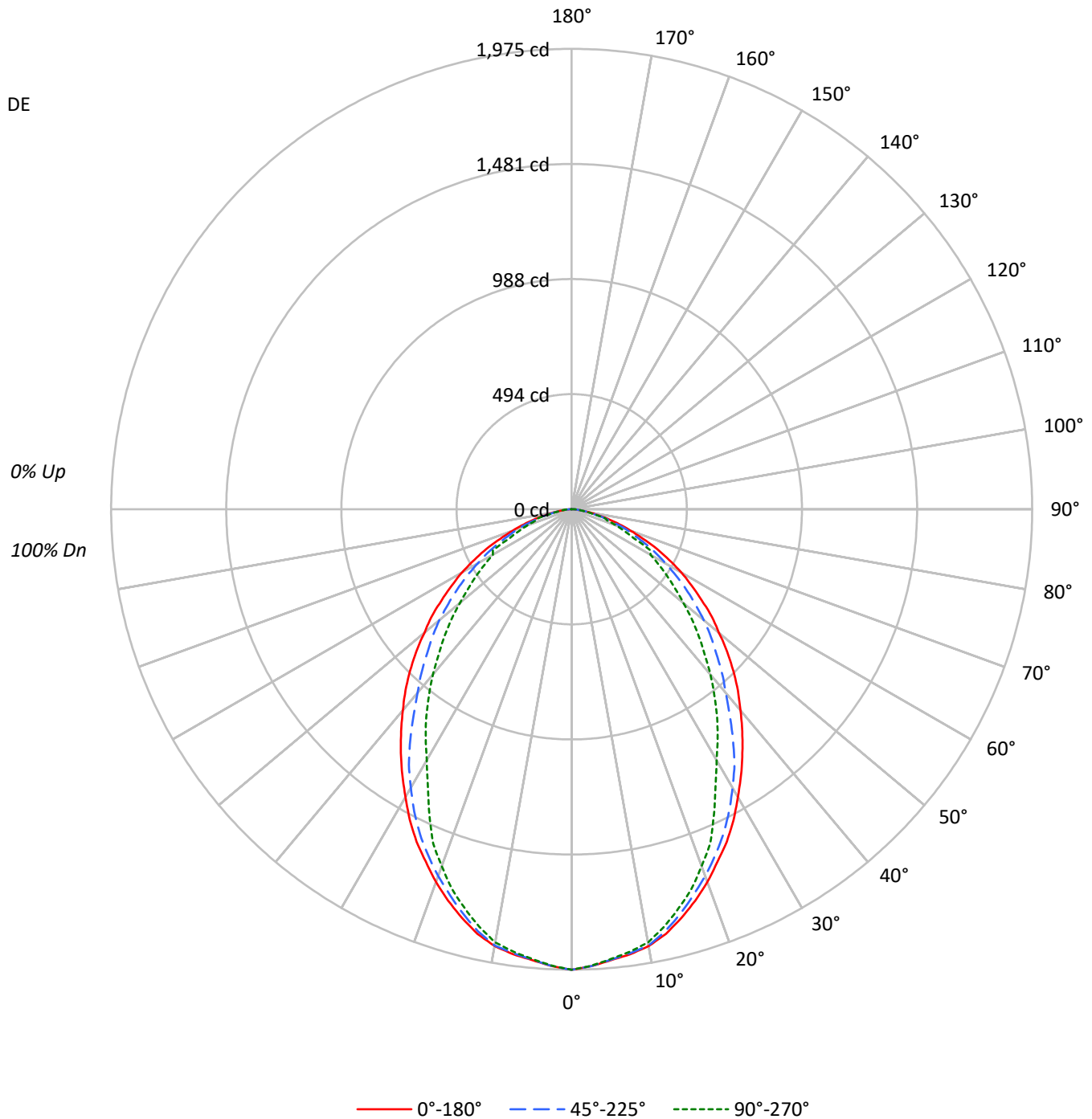
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562057

CATALOG NUMBER: FSR-24-4-LD4-1HI-40-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562057

CATALOG NUMBER: FSR-24-4-LD4-1HI-40-UNV-81-88-EDD

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	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°	2658	2658	2658
5°	2622	2619	2616
10°	2599	2596	2577
15°	2529	2504	2469
20°	2436	2397	2331
25°	2336	2285	2143
30°	2214	2143	1930
35°	2097	1981	1785
40°	1978	1805	1625
45°	1864	1669	1469
50°	1726	1549	1310
55°	1596	1403	1173
60°	1463	1254	1051
65°	1287	1098	931
70°	1060	961	791
75°	843	736	771
80°	566	531	495
85°	352	423	494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1864 cd/sqm



TEST NUMBER: P562057

CATALOG NUMBER: FSR-24-4-LD4-1HI-40-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.9	4.7
10°-20°	504.7	13.0
20°-30°	698.7	18.0
30°-40°	745.0	19.2
40°-50°	679.6	17.5
50°-60°	532.4	13.7
60°-70°	347.0	8.9
70°-80°	153.7	4.0
80°-90°	33.0	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°	1387.2	35.8
0°-40°	2132.2	55.0
0°-60°	3344.2	86.2
0°-90°	3878.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3878.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1975	1975	1975	1975	1975	
5°	1941	1939	1939	1937	1937	184
15°	1816	1816	1797	1779	1772	510
25°	1574	1564	1539	1484	1443	722
35°	1277	1268	1206	1114	1087	798
45°	980	959	877	804	772	755
55°	680	660	598	528	500	610
65°	404	381	345	352	292	398
75°	162	151	142	135	148	174
85°	23	25	27	30	32	32
90°	0	0	0	0	0	



TEST NUMBER: P562057

CATALOG NUMBER: FSR-24-4-LD4-1HI-40-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1975.4	1975.4	1975.4	1975.4	1975.4
2.5°	1961.7	1961.7	1961.7	1959.4	1959.4
5°	1941.1	1938.9	1938.9	1936.6	1936.6
7.5°	1925.2	1922.9	1920.6	1918.3	1913.7
10°	1902.3	1902.3	1900.0	1888.6	1886.3
12.5°	1865.8	1863.5	1854.4	1838.4	1833.8
15°	1815.5	1815.5	1797.3	1779.0	1772.2
17.5°	1760.7	1758.4	1735.6	1717.3	1708.2
20°	1701.4	1696.8	1674.0	1644.3	1628.3
22.5°	1635.1	1635.1	1607.7	1568.9	1552.9
25°	1573.5	1564.3	1539.2	1484.4	1443.3
27.5°	1502.7	1489.0	1461.6	1383.9	1336.0
30°	1425.0	1418.2	1379.4	1278.9	1242.3
32.5°	1352.0	1340.5	1299.4	1194.4	1164.7
35°	1276.6	1267.5	1205.8	1114.4	1087.0
37.5°	1201.2	1189.8	1112.2	1039.1	1004.8
40°	1125.9	1112.2	1027.7	961.4	924.9
42.5°	1055.1	1036.8	954.6	883.8	842.7
45°	979.7	959.2	876.9	803.9	771.9
47.5°	904.3	886.1	810.7	735.4	698.8
50°	824.4	808.4	739.9	664.6	625.7
52.5°	758.2	733.1	666.8	591.5	559.5
55°	680.5	660.0	598.3	527.5	500.1
57.5°	609.7	589.2	532.1	465.9	443.0
60°	543.5	513.8	465.9	408.8	390.5
62.5°	470.4	447.6	406.5	358.5	381.4
65°	404.2	381.4	344.8	351.7	292.3
67.5°	331.1	319.7	287.7	255.8	246.6
70°	269.5	255.8	244.4	210.1	201.0
72.5°	214.7	201.0	185.0	166.7	159.9
75°	162.1	150.7	141.6	134.7	148.4
77.5°	111.9	107.3	100.5	93.6	91.3
80°	73.1	70.8	68.5	66.2	63.9
82.5°	43.4	43.4	43.4	43.4	43.4
85°	22.8	25.1	27.4	29.7	32.0
87.5°	13.7	13.7	16.0	18.3	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)