

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: P562137

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562137
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3861.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

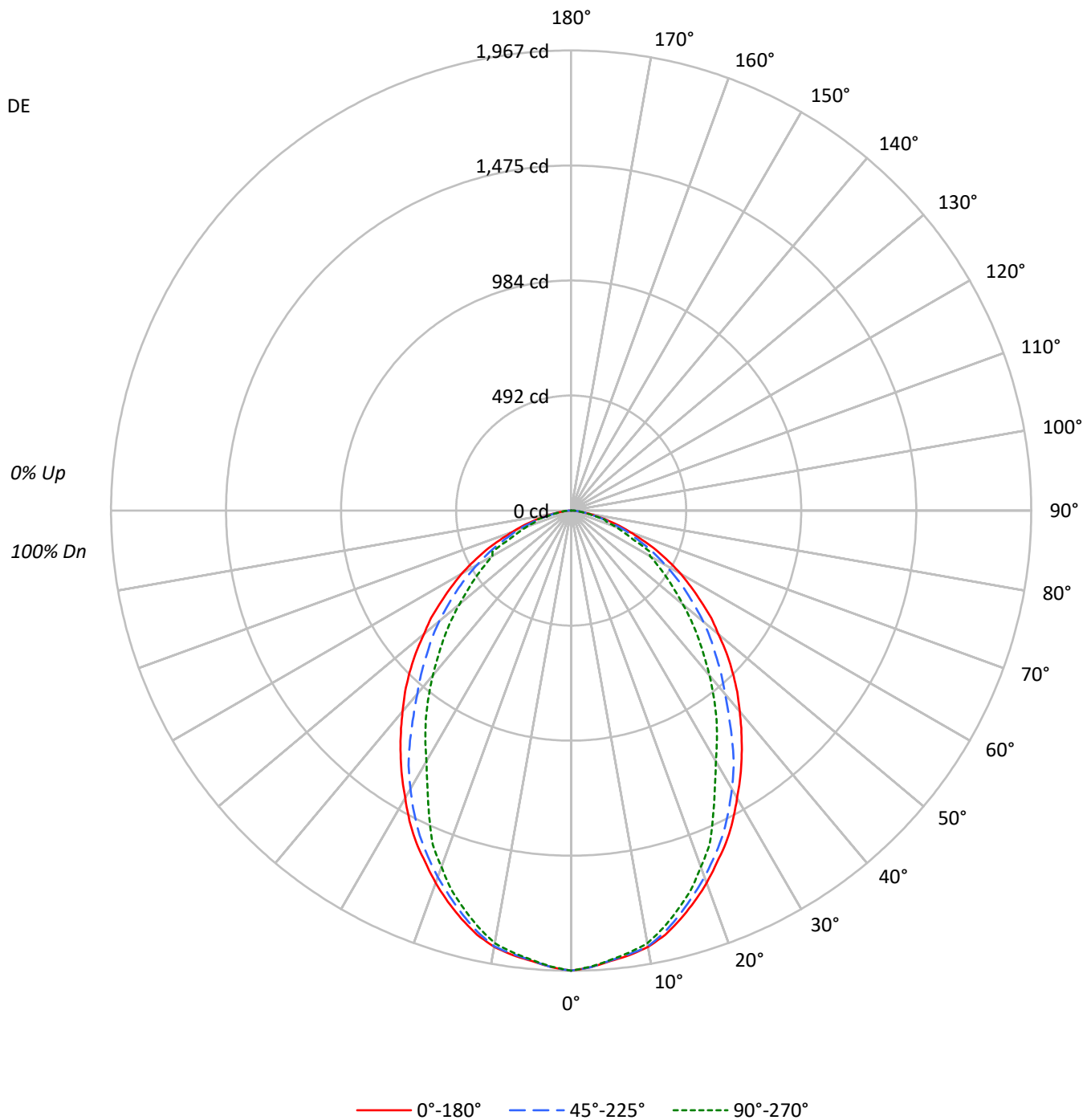
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	50	30	10	0																
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°	2646	2646	2646
5°	2610	2607	2604
10°	2588	2585	2566
15°	2518	2493	2458
20°	2425	2386	2321
25°	2326	2275	2133
30°	2204	2134	1922
35°	2088	1972	1778
40°	1969	1797	1617
45°	1856	1661	1462
50°	1718	1542	1304
55°	1590	1397	1168
60°	1456	1248	1046
65°	1281	1093	926
70°	1055	957	787
75°	839	733	768
80°	564	528	494
85°	350	421	491

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1856 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.1	4.7
10°-20°	502.4	13.0
20°-30°	695.6	18.0
30°-40°	741.7	19.2
40°-50°	676.6	17.5
50°-60°	530.1	13.7
60°-70°	345.5	8.9
70°-80°	153.1	4.0
80°-90°	32.9	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°	1381.1	35.8
0°-40°	2122.8	55.0
0°-60°	3329.6	86.2
0°-90°	3861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3861.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1967	1967	1967	1967	1967	
5°	1933	1930	1930	1928	1928	183
15°	1808	1808	1789	1771	1764	508
25°	1567	1558	1532	1478	1437	719
35°	1271	1262	1200	1110	1082	795
45°	975	955	873	800	768	751
55°	678	657	596	525	498	608
65°	402	380	343	350	291	397
75°	161	150	141	134	148	173
85°	23	25	27	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1966.7	1966.7	1966.7	1966.7	1966.7
2.5°	1953.1	1953.1	1953.1	1950.8	1950.8
5°	1932.6	1930.4	1930.4	1928.1	1928.1
7.5°	1916.7	1914.4	1912.2	1909.9	1905.4
10°	1894.0	1894.0	1891.7	1880.3	1878.1
12.5°	1857.6	1855.3	1846.2	1830.3	1825.8
15°	1807.6	1807.6	1789.4	1771.2	1764.4
17.5°	1753.0	1750.7	1728.0	1709.8	1700.7
20°	1693.9	1689.4	1666.6	1637.1	1621.1
22.5°	1628.0	1628.0	1600.7	1562.0	1546.1
25°	1566.6	1557.5	1532.5	1477.9	1437.0
27.5°	1496.1	1482.4	1455.2	1377.9	1330.1
30°	1418.8	1412.0	1373.3	1273.3	1236.9
32.5°	1346.0	1334.7	1293.7	1189.1	1159.6
35°	1271.0	1261.9	1200.5	1109.6	1082.3
37.5°	1196.0	1184.6	1107.3	1034.5	1000.4
40°	1120.9	1107.3	1023.2	957.2	920.8
42.5°	1050.4	1032.3	950.4	879.9	839.0
45°	975.4	954.9	873.1	800.3	768.5
47.5°	900.4	882.2	807.2	732.1	695.7
50°	820.8	804.9	736.7	661.6	623.0
52.5°	754.9	729.9	663.9	588.9	557.1
55°	677.6	657.1	595.7	525.2	497.9
57.5°	607.1	586.6	529.8	463.8	441.1
60°	541.1	511.6	463.8	407.0	388.8
62.5°	468.4	445.6	404.7	357.0	379.7
65°	402.4	379.7	343.3	350.1	291.0
67.5°	329.7	318.3	286.5	254.7	245.6
70°	268.3	254.7	243.3	209.2	200.1
72.5°	213.7	200.1	184.2	166.0	159.2
75°	161.4	150.1	141.0	134.1	147.8
77.5°	111.4	106.9	100.0	93.2	90.9
80°	72.8	70.5	68.2	65.9	63.7
82.5°	43.2	43.2	43.2	43.2	43.2
85°	22.7	25.0	27.3	29.6	31.8
87.5°	13.6	13.6	15.9	18.2	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)