

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: P562132

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562132
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-82-86-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3855.0 lumens
Efficiency: N/A
Efficacy: 89.2 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

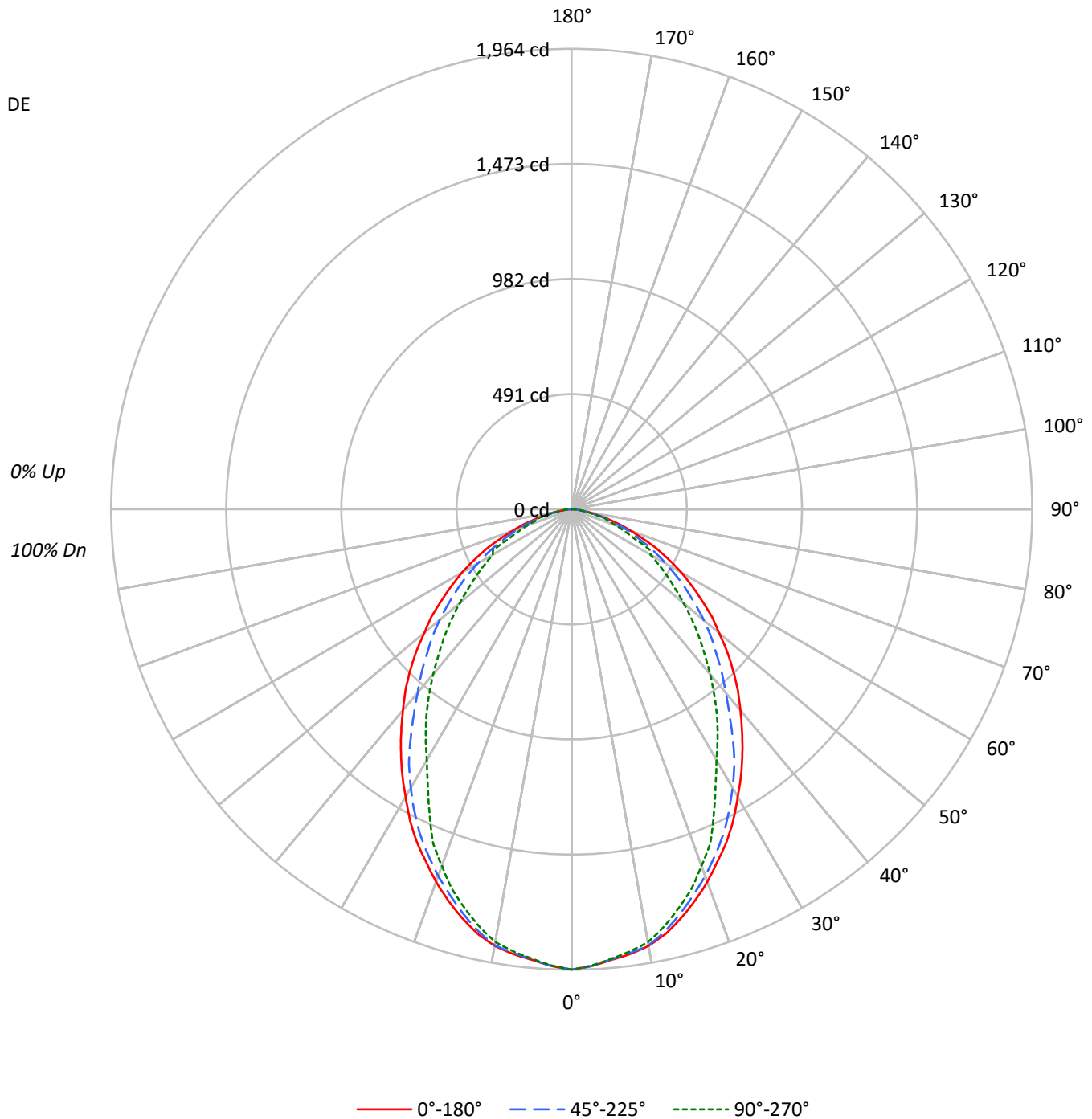
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	2642	2642	2642
5°	2606	2603	2600
10°	2584	2581	2562
15°	2514	2489	2454
20°	2422	2383	2318
25°	2322	2272	2130
30°	2201	2130	1919
35°	2084	1969	1775
40°	1966	1794	1615
45°	1853	1659	1460
50°	1715	1540	1302
55°	1587	1395	1166
60°	1454	1246	1045
65°	1279	1091	925
70°	1054	956	786
75°	838	731	767
80°	563	528	493
85°	350	420	491

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.8	4.7
10°-20°	501.7	13.0
20°-30°	694.5	18.0
30°-40°	740.6	19.2
40°-50°	675.6	17.5
50°-60°	529.3	13.7
60°-70°	345.0	8.9
70°-80°	152.8	4.0
80°-90°	32.8	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°	1379.0	35.8
0°-40°	2119.5	55.0
0°-60°	3324.4	86.2
0°-90°	3855.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3855.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1964	1964	1964	1964	1964	
5°	1930	1927	1927	1925	1925	183
15°	1805	1805	1787	1768	1762	507
25°	1564	1555	1530	1476	1435	718
35°	1269	1260	1199	1108	1081	793
45°	974	954	872	799	767	750
55°	676	656	595	524	497	607
65°	402	379	343	350	291	396
75°	161	150	141	134	148	173
85°	23	25	27	30	32	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1963.7	1963.7	1963.7	1963.7	1963.7
2.5°	1950.1	1950.1	1950.1	1947.8	1947.8
5°	1929.6	1927.4	1927.4	1925.1	1925.1
7.5°	1913.7	1911.5	1909.2	1906.9	1902.4
10°	1891.0	1891.0	1888.8	1877.4	1875.1
12.5°	1854.7	1852.4	1843.4	1827.5	1822.9
15°	1804.8	1804.8	1786.6	1768.5	1761.6
17.5°	1750.3	1748.0	1725.3	1707.2	1698.1
20°	1691.3	1686.7	1664.0	1634.5	1618.6
22.5°	1625.4	1625.4	1598.2	1559.6	1543.7
25°	1564.1	1555.1	1530.1	1475.6	1434.7
27.5°	1493.8	1480.1	1452.9	1375.7	1328.0
30°	1416.6	1409.8	1371.2	1271.3	1235.0
32.5°	1343.9	1332.6	1291.7	1187.3	1157.8
35°	1269.0	1259.9	1198.6	1107.8	1080.6
37.5°	1194.1	1182.8	1105.6	1032.9	998.9
40°	1119.2	1105.6	1021.6	955.7	919.4
42.5°	1048.8	1030.7	948.9	878.6	837.7
45°	973.9	953.5	871.7	799.1	767.3
47.5°	899.0	880.8	805.9	731.0	694.7
50°	819.5	803.6	735.5	660.6	622.0
52.5°	753.7	728.7	662.9	588.0	556.2
55°	676.5	656.1	594.8	524.4	497.2
57.5°	606.1	585.7	528.9	463.1	440.4
60°	540.3	510.8	463.1	406.4	388.2
62.5°	467.7	445.0	404.1	356.4	379.1
65°	401.8	379.1	342.8	349.6	290.6
67.5°	329.2	317.8	286.0	254.3	245.2
70°	267.9	254.3	242.9	208.9	199.8
72.5°	213.4	199.8	183.9	165.7	158.9
75°	161.2	149.8	140.7	133.9	147.6
77.5°	111.2	106.7	99.9	93.1	90.8
80°	72.6	70.4	68.1	65.8	63.6
82.5°	43.1	43.1	43.1	43.1	43.1
85°	22.7	25.0	27.2	29.5	31.8
87.5°	13.6	13.6	15.9	18.2	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)