

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: P562433

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562433
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-LD4-1STD-50-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3808.0 lumens
Efficiency: N/A
Efficacy: 114.4 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

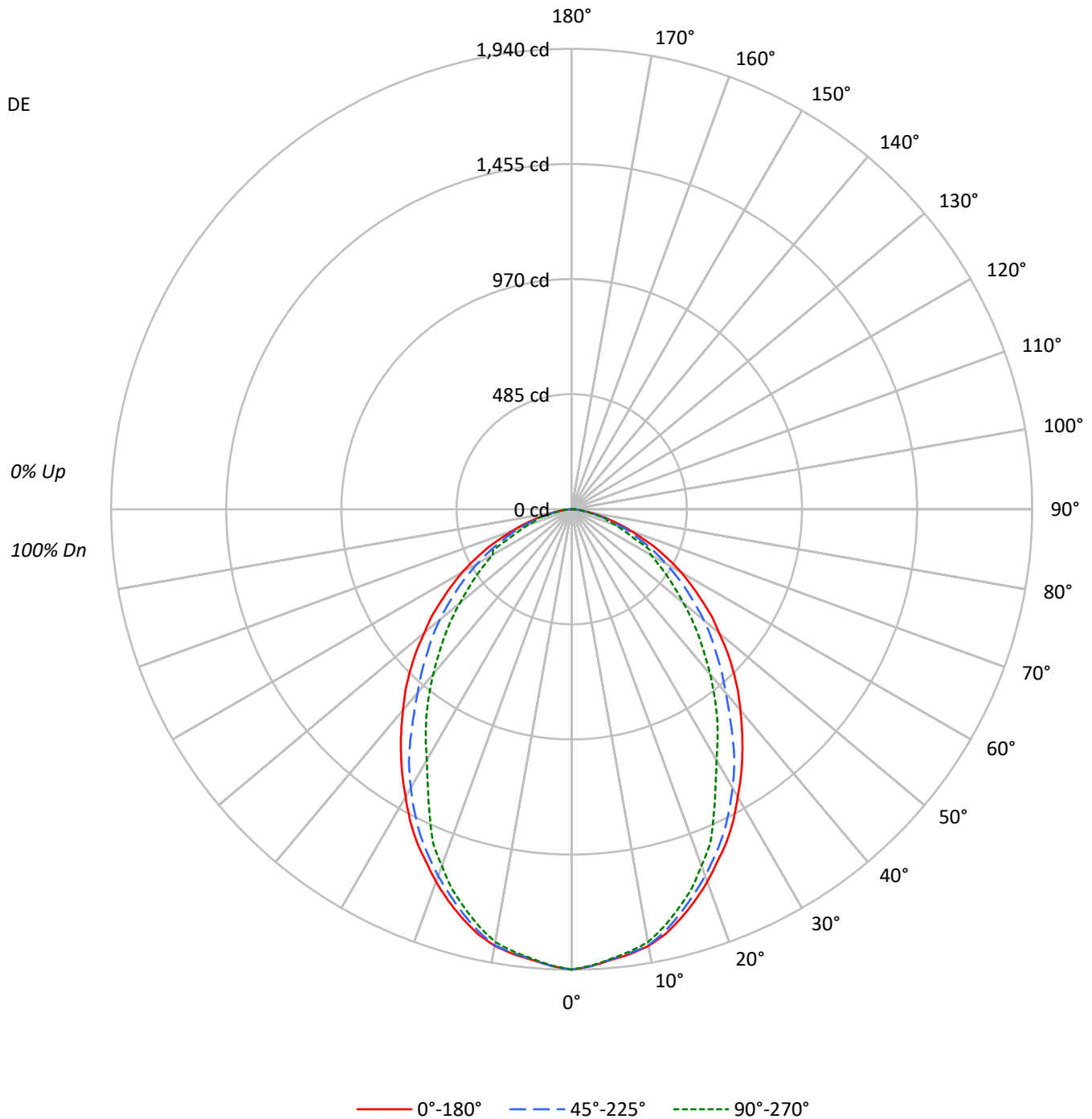
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	2610	2610	2610
5°	2574	2571	2568
10°	2552	2549	2531
15°	2483	2458	2424
20°	2392	2354	2289
25°	2294	2244	2104
30°	2174	2104	1895
35°	2059	1945	1753
40°	1942	1772	1595
45°	1831	1639	1442
50°	1694	1521	1286
55°	1568	1378	1152
60°	1436	1231	1032
65°	1264	1078	914
70°	1041	944	776
75°	828	723	758
80°	556	521	487
85°	346	415	485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1831 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.6	4.7
10°-20°	495.5	13.0
20°-30°	686.0	18.0
30°-40°	731.5	19.2
40°-50°	667.4	17.5
50°-60°	522.8	13.7
60°-70°	340.8	8.9
70°-80°	151.0	4.0
80°-90°	32.4	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°	1362.2	35.8
0°-40°	2093.7	55.0
0°-60°	3283.9	86.2
0°-90°	3808.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3808.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1940	1940	1940	1940	1940	
5°	1906	1904	1904	1902	1902	181
15°	1783	1783	1765	1747	1740	501
25°	1545	1536	1511	1458	1417	709
35°	1254	1245	1184	1094	1067	784
45°	962	942	861	789	758	741
55°	668	648	588	518	491	599
65°	397	374	339	345	287	391
75°	159	148	139	132	146	171
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°	1939.7	1939.7	1939.7	1939.7	1939.7
2.5°	1926.3	1926.3	1926.3	1924.0	1924.0
5°	1906.1	1903.9	1903.9	1901.6	1901.6
7.5°	1890.4	1888.2	1885.9	1883.7	1879.2
10°	1868.0	1868.0	1865.7	1854.5	1852.3
12.5°	1832.1	1829.9	1820.9	1805.2	1800.7
15°	1782.8	1782.8	1764.8	1746.9	1740.2
17.5°	1729.0	1726.7	1704.3	1686.3	1677.4
20°	1670.6	1666.2	1643.7	1614.6	1598.9
22.5°	1605.6	1605.6	1578.7	1540.6	1524.9
25°	1545.1	1536.1	1511.4	1457.6	1417.2
27.5°	1475.6	1462.1	1435.2	1358.9	1311.9
30°	1399.3	1392.6	1354.5	1255.8	1219.9
32.5°	1327.5	1316.3	1276.0	1172.8	1143.7
35°	1253.5	1244.6	1184.0	1094.3	1067.4
37.5°	1179.5	1168.3	1092.1	1020.3	986.7
40°	1105.5	1092.1	1009.1	944.1	908.2
42.5°	1036.0	1018.1	937.4	867.8	827.5
45°	962.0	941.8	861.1	789.4	758.0
47.5°	888.0	870.1	796.1	722.1	686.2
50°	809.5	793.8	726.6	652.6	614.4
52.5°	744.5	719.8	654.8	580.8	549.4
55°	668.3	648.1	587.5	518.0	491.1
57.5°	598.7	578.6	522.5	457.5	435.0
60°	533.7	504.6	457.5	401.4	383.5
62.5°	462.0	439.5	399.2	352.1	374.5
65°	396.9	374.5	338.6	345.3	287.0
67.5°	325.2	313.9	282.6	251.2	242.2
70°	264.6	251.2	239.9	206.3	197.3
72.5°	210.8	197.3	181.6	163.7	157.0
75°	159.2	148.0	139.0	132.3	145.8
77.5°	109.9	105.4	98.7	91.9	89.7
80°	71.8	69.5	67.3	65.0	62.8
82.5°	42.6	42.6	42.6	42.6	42.6
85°	22.4	24.7	26.9	29.2	31.4
87.5°	13.5	13.5	15.7	17.9	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)