

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: P562118

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562118
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-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3810.0 lumens
Efficiency: N/A
Efficacy: 88.2 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

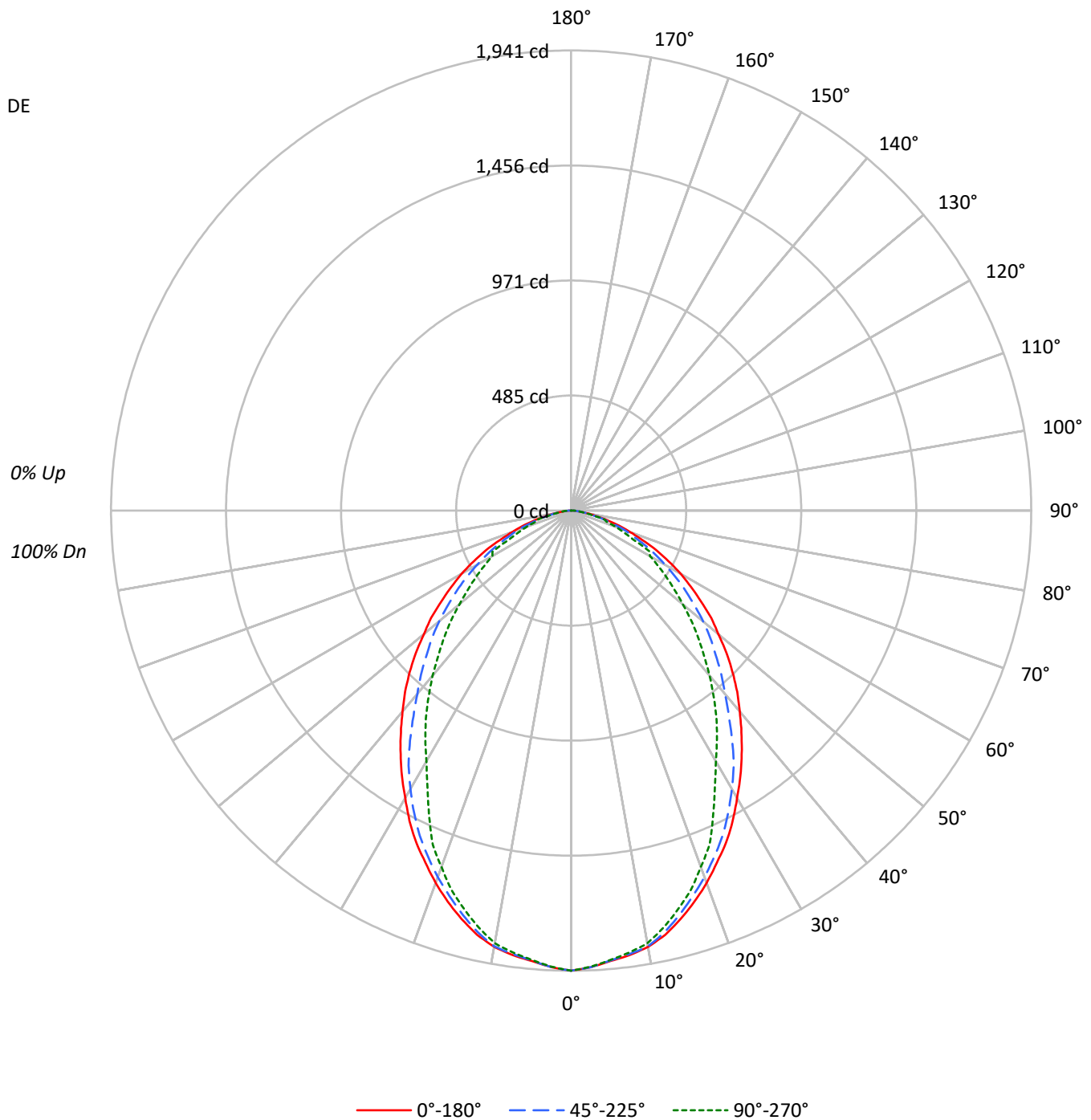
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2611	2611	2611
5°	2576	2573	2570
10°	2554	2550	2532
15°	2485	2460	2425
20°	2393	2355	2291
25°	2295	2245	2105
30°	2175	2105	1896
35°	2060	1946	1754
40°	1943	1773	1596
45°	1831	1639	1443
50°	1696	1522	1287
55°	1568	1379	1153
60°	1437	1232	1033
65°	1264	1079	914
70°	1042	945	777
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°	180.7	4.7
10°-20°	495.8	13.0
20°-30°	686.4	18.0
30°-40°	731.9	19.2
40°-50°	667.7	17.5
50°-60°	523.1	13.7
60°-70°	340.9	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°	1362.9	35.8
0°-40°	2094.8	55.0
0°-60°	3285.6	86.2
0°-90°	3810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3810.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1941	1941	1941	1941	1941	
5°	1907	1905	1905	1903	1903	181
15°	1784	1784	1766	1748	1741	501
25°	1546	1537	1512	1458	1418	710
35°	1254	1245	1185	1095	1068	784
45°	962	942	862	790	758	741
55°	669	648	588	518	491	600
65°	397	375	339	346	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°	1940.8	1940.8	1940.8	1940.8	1940.8
2.5°	1927.3	1927.3	1927.3	1925.1	1925.1
5°	1907.1	1904.9	1904.9	1902.6	1902.6
7.5°	1891.4	1889.2	1886.9	1884.7	1880.2
10°	1869.0	1869.0	1866.7	1855.5	1853.3
12.5°	1833.1	1830.8	1821.8	1806.1	1801.7
15°	1783.7	1783.7	1765.8	1747.8	1741.1
17.5°	1729.9	1727.6	1705.2	1687.2	1678.3
20°	1671.5	1667.0	1644.6	1615.4	1599.7
22.5°	1606.5	1606.5	1579.5	1541.4	1525.7
25°	1545.9	1536.9	1512.2	1458.4	1418.0
27.5°	1476.3	1462.9	1435.9	1359.7	1312.5
30°	1400.0	1393.3	1355.2	1256.4	1220.5
32.5°	1328.2	1317.0	1276.6	1173.4	1144.3
35°	1254.2	1245.2	1184.7	1094.9	1068.0
37.5°	1180.2	1168.9	1092.7	1020.9	987.2
40°	1106.1	1092.7	1009.6	944.6	908.7
42.5°	1036.6	1018.6	937.8	868.3	827.9
45°	962.5	942.3	861.6	789.8	758.4
47.5°	888.5	870.5	796.5	722.5	686.6
50°	810.0	794.3	726.9	652.9	614.8
52.5°	744.9	720.2	655.1	581.1	549.7
55°	668.6	648.4	587.8	518.3	491.4
57.5°	599.1	578.9	522.8	457.7	435.3
60°	534.0	504.8	457.7	401.6	383.7
62.5°	462.2	439.8	399.4	352.3	374.7
65°	397.1	374.7	338.8	345.5	287.2
67.5°	325.3	314.1	282.7	251.3	242.3
70°	264.8	251.3	240.1	206.4	197.4
72.5°	210.9	197.4	181.7	163.8	157.1
75°	159.3	148.1	139.1	132.4	145.8
77.5°	109.9	105.5	98.7	92.0	89.7
80°	71.8	69.6	67.3	65.1	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)