

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: P562432

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562432
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-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3313.0 lumens
Efficiency: N/A
Efficacy: 99.5 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

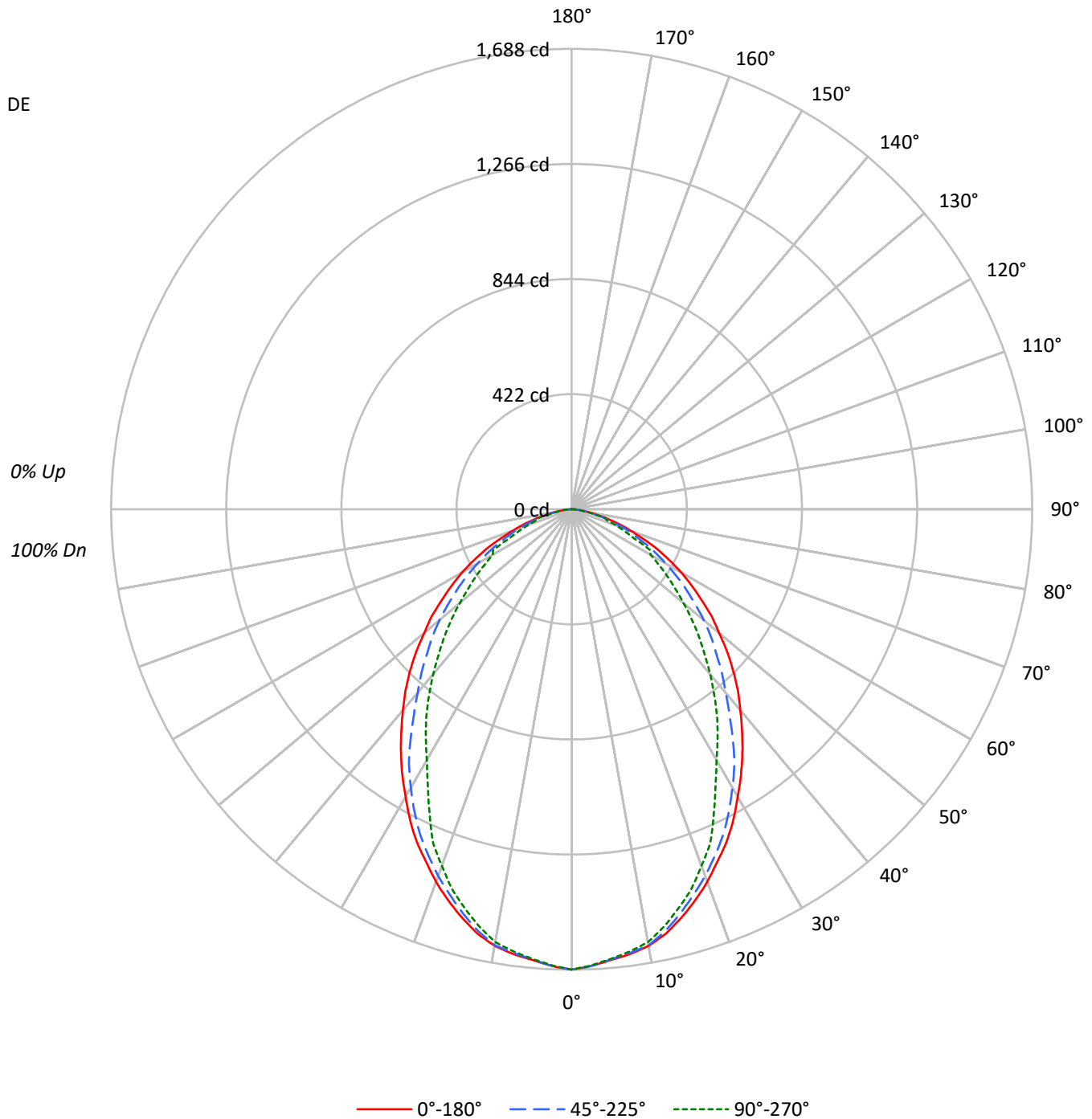
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2271	2271	2271
5°	2240	2237	2234
10°	2220	2218	2202
15°	2160	2139	2109
20°	2081	2048	1992
25°	1996	1952	1830
30°	1891	1831	1649
35°	1791	1692	1525
40°	1689	1542	1388
45°	1593	1426	1255
50°	1474	1323	1119
55°	1364	1199	1002
60°	1249	1071	898
65°	1099	938	795
70°	906	821	675
75°	720	629	659
80°	483	453	423
85°	301	361	421

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1593 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.1	4.7
10°-20°	431.1	13.0
20°-30°	596.9	18.0
30°-40°	636.4	19.2
40°-50°	580.6	17.5
50°-60°	454.9	13.7
60°-70°	296.5	8.9
70°-80°	131.3	4.0
80°-90°	28.2	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°	1185.1	35.8
0°-40°	1821.5	55.0
0°-60°	2857.0	86.2
0°-90°	3313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1688	1688	1688	1688	1688	
5°	1658	1656	1656	1654	1654	157
15°	1551	1551	1535	1520	1514	436
25°	1344	1336	1315	1268	1233	617
35°	1091	1083	1030	952	929	682
45°	837	819	749	687	659	645
55°	581	564	511	451	427	521
65°	345	326	295	300	250	340
75°	138	129	121	115	127	148
85°	20	22	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1687.6	1687.6	1687.6	1687.6	1687.6
2.5°	1675.9	1675.9	1675.9	1673.9	1673.9
5°	1658.3	1656.4	1656.4	1654.4	1654.4
7.5°	1644.7	1642.7	1640.8	1638.8	1634.9
10°	1625.2	1625.2	1623.2	1613.5	1611.5
12.5°	1594.0	1592.0	1584.2	1570.5	1566.6
15°	1551.0	1551.0	1535.4	1519.8	1514.0
17.5°	1504.2	1502.3	1482.7	1467.1	1459.3
20°	1453.5	1449.6	1430.1	1404.7	1391.0
22.5°	1396.9	1396.9	1373.5	1340.3	1326.7
25°	1344.2	1336.4	1315.0	1268.1	1233.0
27.5°	1283.7	1272.0	1248.6	1182.3	1141.3
30°	1217.4	1211.6	1178.4	1092.5	1061.3
32.5°	1155.0	1145.2	1110.1	1020.4	995.0
35°	1090.6	1082.8	1030.1	952.1	928.7
37.5°	1026.2	1016.5	950.1	887.7	858.4
40°	961.8	950.1	877.9	821.4	790.1
42.5°	901.4	885.7	815.5	755.0	719.9
45°	837.0	819.4	749.2	686.7	659.4
47.5°	772.6	757.0	692.6	628.2	597.0
50°	704.3	690.6	632.1	567.7	534.6
52.5°	647.7	626.3	569.7	505.3	478.0
55°	581.4	563.8	511.2	450.7	427.3
57.5°	520.9	503.4	454.6	398.0	378.5
60°	464.3	439.0	398.0	349.2	333.6
62.5°	401.9	382.4	347.3	306.3	325.8
65°	345.3	325.8	294.6	300.5	249.7
67.5°	282.9	273.1	245.8	218.5	210.7
70°	230.2	218.5	208.8	179.5	171.7
72.5°	183.4	171.7	158.0	142.4	136.6
75°	138.5	128.8	121.0	115.1	126.8
77.5°	95.6	91.7	85.8	80.0	78.0
80°	62.4	60.5	58.5	56.6	54.6
82.5°	37.1	37.1	37.1	37.1	37.1
85°	19.5	21.5	23.4	25.4	27.3
87.5°	11.7	11.7	13.7	15.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)