

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: P562352

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562352
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-40-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3312.0 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

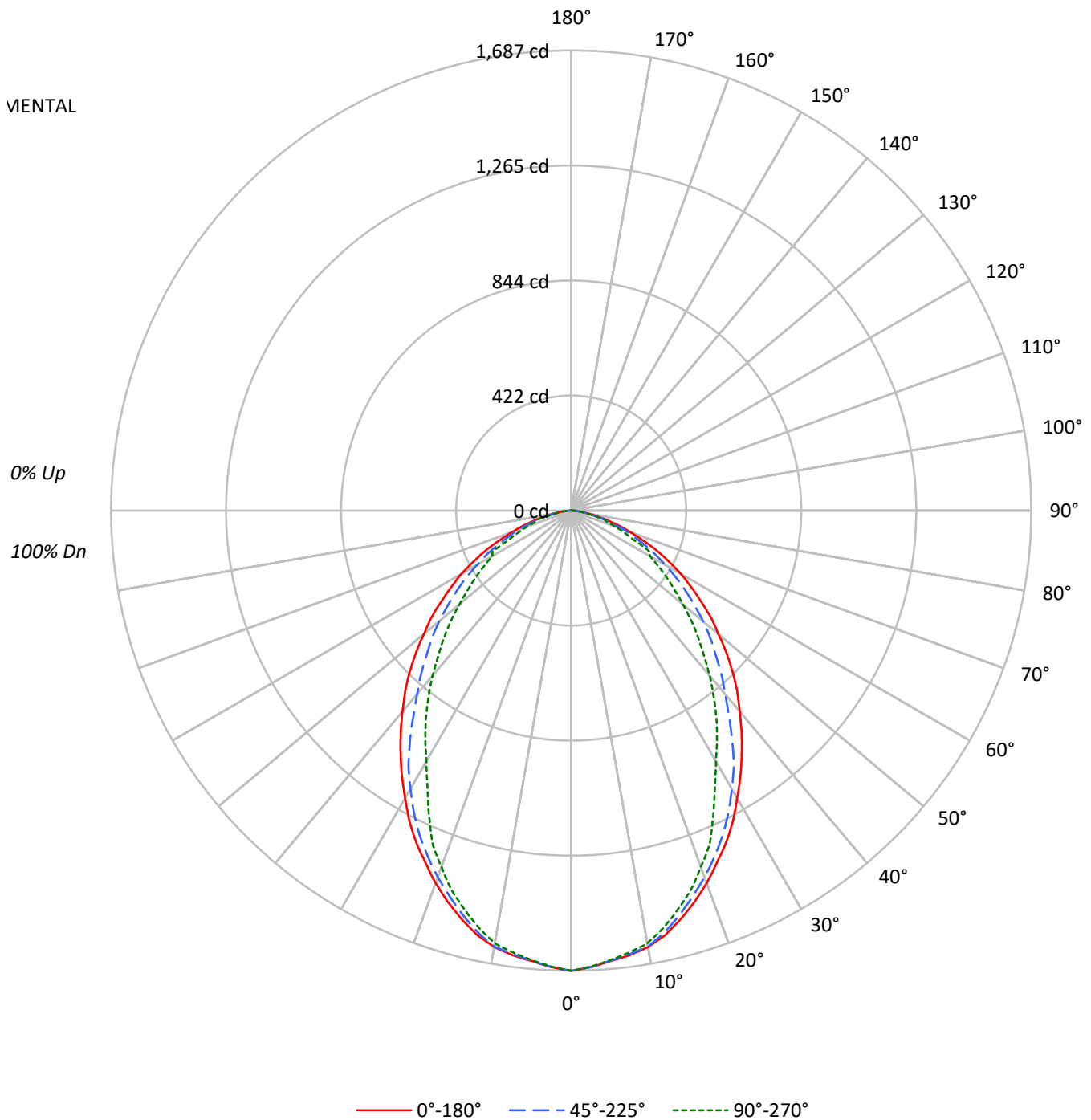
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2270	2270	2270
5°	2239	2237	2234
10°	2220	2217	2201
15°	2160	2138	2108
20°	2080	2047	1991
25°	1995	1952	1830
30°	1891	1830	1648
35°	1791	1691	1525
40°	1689	1542	1387
45°	1592	1425	1254
50°	1474	1323	1119
55°	1363	1199	1002
60°	1249	1071	897
65°	1099	938	795
70°	905	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: 1592 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.0	4.7
10°-20°	431.0	13.0
20°-30°	596.7	18.0
30°-40°	636.2	19.2
40°-50°	580.4	17.5
50°-60°	454.7	13.7
60°-70°	296.4	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°	1184.7	35.8
0°-40°	1821.0	55.0
0°-60°	2856.1	86.2
0°-90°	3312.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3312.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1687	1687	1687	1687	1687	
5°	1658	1656	1656	1654	1654	157
15°	1551	1551	1535	1519	1514	436
25°	1344	1336	1315	1268	1233	617
35°	1090	1082	1030	952	928	682
45°	837	819	749	686	659	645
55°	581	564	511	450	427	521
65°	345	326	294	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°	1687.1	1687.1	1687.1	1687.1	1687.1
2.5°	1675.4	1675.4	1675.4	1673.4	1673.4
5°	1657.8	1655.9	1655.9	1653.9	1653.9
7.5°	1644.2	1642.2	1640.3	1638.3	1634.4
10°	1624.7	1624.7	1622.7	1613.0	1611.0
12.5°	1593.5	1591.5	1583.7	1570.1	1566.2
15°	1550.6	1550.6	1535.0	1519.4	1513.5
17.5°	1503.8	1501.8	1482.3	1466.7	1458.9
20°	1453.0	1449.1	1429.6	1404.3	1390.6
22.5°	1396.5	1396.5	1373.1	1339.9	1326.3
25°	1343.8	1336.0	1314.6	1267.8	1232.6
27.5°	1283.4	1271.7	1248.3	1181.9	1141.0
30°	1217.0	1211.2	1178.0	1092.2	1061.0
32.5°	1154.6	1144.9	1109.8	1020.1	994.7
35°	1090.3	1082.5	1029.8	951.8	928.4
37.5°	1025.9	1016.2	949.8	887.4	858.2
40°	961.5	949.8	877.7	821.1	789.9
42.5°	901.1	885.5	815.3	754.8	719.7
45°	836.7	819.2	749.0	686.5	659.2
47.5°	772.4	756.8	692.4	628.0	596.8
50°	704.1	690.4	631.9	567.6	534.4
52.5°	647.5	626.1	569.5	505.2	477.8
55°	581.2	563.7	511.0	450.5	427.1
57.5°	520.8	503.2	454.4	397.9	378.4
60°	464.2	438.8	397.9	349.1	333.5
62.5°	401.8	382.3	347.2	306.2	325.7
65°	345.2	325.7	294.5	300.4	249.7
67.5°	282.8	273.1	245.7	218.4	210.6
70°	230.1	218.4	208.7	179.4	171.6
72.5°	183.3	171.6	158.0	142.4	136.5
75°	138.5	128.7	120.9	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)