

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: P562040

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562040
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-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3430.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

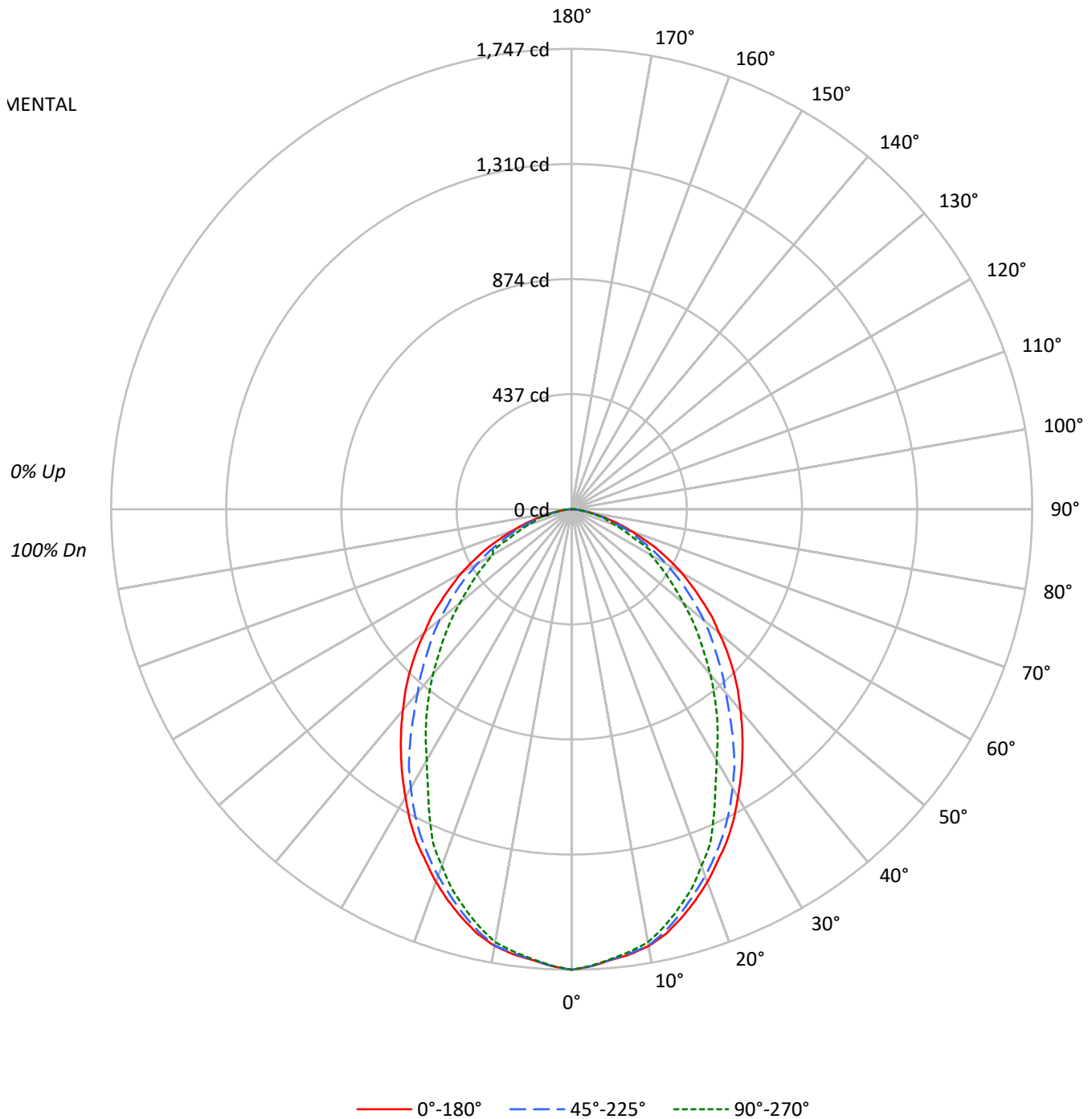
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2351	2351	2351
5°	2319	2316	2313
10°	2299	2296	2279
15°	2237	2214	2183
20°	2155	2120	2062
25°	2066	2021	1895
30°	1958	1895	1707
35°	1855	1752	1579
40°	1749	1596	1437
45°	1649	1476	1299
50°	1526	1370	1158
55°	1412	1241	1038
60°	1294	1109	929
65°	1138	971	823
70°	937	850	699
75°	745	651	683
80°	501	470	439
85°	312	374	437

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1649 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.6	4.7
10°-20°	446.3	13.0
20°-30°	617.9	18.0
30°-40°	658.9	19.2
40°-50°	601.1	17.5
50°-60°	470.9	13.7
60°-70°	306.9	8.9
70°-80°	136.0	4.0
80°-90°	29.2	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°	1226.9	35.8
0°-40°	1885.8	55.0
0°-60°	2957.9	86.2
0°-90°	3430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1747	1747	1747	1747	1747	
5°	1717	1715	1715	1713	1713	163
15°	1606	1606	1590	1574	1567	451
25°	1392	1384	1361	1313	1277	639
35°	1129	1121	1066	986	962	706
45°	866	848	776	711	683	667
55°	602	584	529	467	442	540
65°	358	337	305	311	258	352
75°	143	133	125	119	131	154
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1747.2	1747.2	1747.2	1747.2	1747.2
2.5°	1735.1	1735.1	1735.1	1733.1	1733.1
5°	1716.9	1714.9	1714.9	1712.9	1712.9
7.5°	1702.8	1700.7	1698.7	1696.7	1692.7
10°	1682.6	1682.6	1680.5	1670.4	1668.4
12.5°	1650.2	1648.2	1640.1	1626.0	1622.0
15°	1605.8	1605.8	1589.6	1573.5	1567.4
17.5°	1557.3	1555.3	1535.1	1518.9	1510.9
20°	1504.8	1500.8	1480.6	1454.3	1440.2
22.5°	1446.2	1446.2	1422.0	1387.7	1373.5
25°	1391.7	1383.6	1361.4	1312.9	1276.6
27.5°	1329.1	1317.0	1292.7	1224.0	1181.6
30°	1260.4	1254.3	1220.0	1131.1	1098.8
32.5°	1195.8	1185.7	1149.3	1056.4	1030.1
35°	1129.1	1121.0	1066.5	985.7	961.5
37.5°	1062.5	1052.4	983.7	919.0	888.7
40°	995.8	983.7	908.9	850.4	818.1
42.5°	933.2	917.0	844.3	781.7	745.3
45°	866.5	848.3	775.6	711.0	682.7
47.5°	799.9	783.7	717.1	650.4	618.1
50°	729.2	715.0	654.4	587.8	553.4
52.5°	670.6	648.4	589.8	523.1	494.9
55°	601.9	583.7	529.2	466.6	442.4
57.5°	539.3	521.1	470.6	412.1	391.9
60°	480.7	454.5	412.1	361.6	345.4
62.5°	416.1	395.9	359.5	317.1	337.3
65°	357.5	337.3	305.0	311.1	258.5
67.5°	292.9	282.8	254.5	226.2	218.1
70°	238.3	226.2	216.1	185.8	177.7
72.5°	189.9	177.7	163.6	147.5	141.4
75°	143.4	133.3	125.2	119.2	131.3
77.5°	99.0	94.9	88.9	82.8	80.8
80°	64.6	62.6	60.6	58.6	56.6
82.5°	38.4	38.4	38.4	38.4	38.4
85°	20.2	22.2	24.2	26.3	28.3
87.5°	12.1	12.1	14.1	16.2	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)