

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: P562412

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562412
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-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3289.0 lumens
Efficiency: N/A
Efficacy: 98.8 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

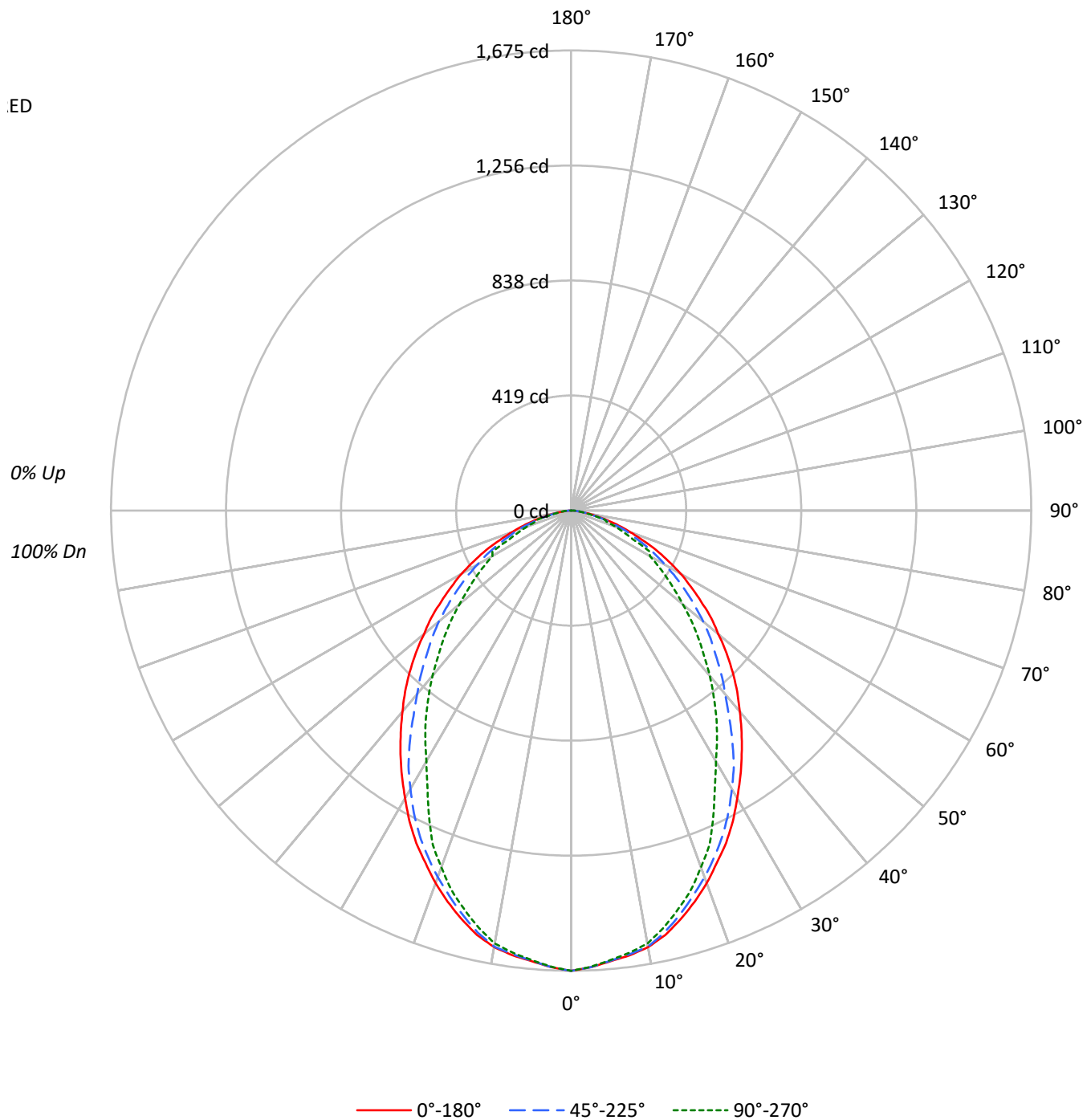
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562412

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562412

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-96-EDD-90

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°	2254	2254	2254
5°	2224	2221	2218
10°	2204	2202	2186
15°	2145	2123	2094
20°	2066	2033	1977
25°	1981	1938	1817
30°	1878	1818	1637
35°	1778	1680	1514
40°	1677	1531	1378
45°	1581	1415	1246
50°	1464	1313	1111
55°	1354	1190	995
60°	1241	1063	891
65°	1091	931	789
70°	899	815	670
75°	715	624	655
80°	480	450	420
85°	299	358	418

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1581 cd/sqm



TEST NUMBER: P562412

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.0	4.7
10°-20°	428.0	13.0
20°-30°	592.5	18.0
30°-40°	631.8	19.2
40°-50°	576.4	17.5
50°-60°	451.6	13.7
60°-70°	294.3	8.9
70°-80°	130.4	4.0
80°-90°	28.0	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°	1176.5	35.8
0°-40°	1808.3	55.0
0°-60°	2836.3	86.2
0°-90°	3289.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3289.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1675	1675	1675	1675	1675	
5°	1646	1644	1644	1642	1642	156
15°	1540	1540	1524	1509	1503	433
25°	1334	1327	1305	1259	1224	613
35°	1083	1075	1023	945	922	677
45°	831	814	744	682	655	640
55°	577	560	508	447	424	518
65°	343	324	292	298	248	338
75°	138	128	120	114	126	147
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



TEST NUMBER: P562412

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1675.4	1675.4	1675.4	1675.4	1675.4
2.5°	1663.8	1663.8	1663.8	1661.8	1661.8
5°	1646.3	1644.4	1644.4	1642.4	1642.4
7.5°	1632.8	1630.8	1628.9	1627.0	1623.1
10°	1613.4	1613.4	1611.5	1601.8	1599.8
12.5°	1582.4	1580.5	1572.7	1559.2	1555.3
15°	1539.8	1539.8	1524.3	1508.8	1503.0
17.5°	1493.3	1491.4	1472.0	1456.5	1448.8
20°	1443.0	1439.1	1419.7	1394.5	1381.0
22.5°	1386.8	1386.8	1363.5	1330.6	1317.1
25°	1334.5	1326.7	1305.4	1259.0	1224.1
27.5°	1274.4	1262.8	1239.6	1173.7	1133.1
30°	1208.6	1202.8	1169.9	1084.6	1053.6
32.5°	1146.6	1136.9	1102.1	1013.0	987.8
35°	1082.7	1075.0	1022.7	945.2	921.9
37.5°	1018.8	1009.1	943.2	881.3	852.2
40°	954.9	943.2	871.6	815.4	784.4
42.5°	894.8	879.3	809.6	749.6	714.7
45°	830.9	813.5	743.7	681.8	654.7
47.5°	767.0	751.5	687.6	623.7	592.7
50°	699.2	685.6	627.5	563.6	530.7
52.5°	643.0	621.7	565.6	501.6	474.5
55°	577.2	559.7	507.5	447.4	424.2
57.5°	517.1	499.7	451.3	395.1	375.7
60°	461.0	435.8	395.1	346.7	331.2
62.5°	399.0	379.6	344.8	304.1	323.5
65°	342.8	323.5	292.5	298.3	247.9
67.5°	280.8	271.2	244.0	216.9	209.2
70°	228.5	216.9	207.2	178.2	170.4
72.5°	182.1	170.4	156.9	141.4	135.6
75°	137.5	127.8	120.1	114.3	125.9
77.5°	94.9	91.0	85.2	79.4	77.5
80°	62.0	60.0	58.1	56.2	54.2
82.5°	36.8	36.8	36.8	36.8	36.8
85°	19.4	21.3	23.2	25.2	27.1
87.5°	11.6	11.6	13.6	15.5	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)