

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: P562336

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562336
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-35-UNV-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3272.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

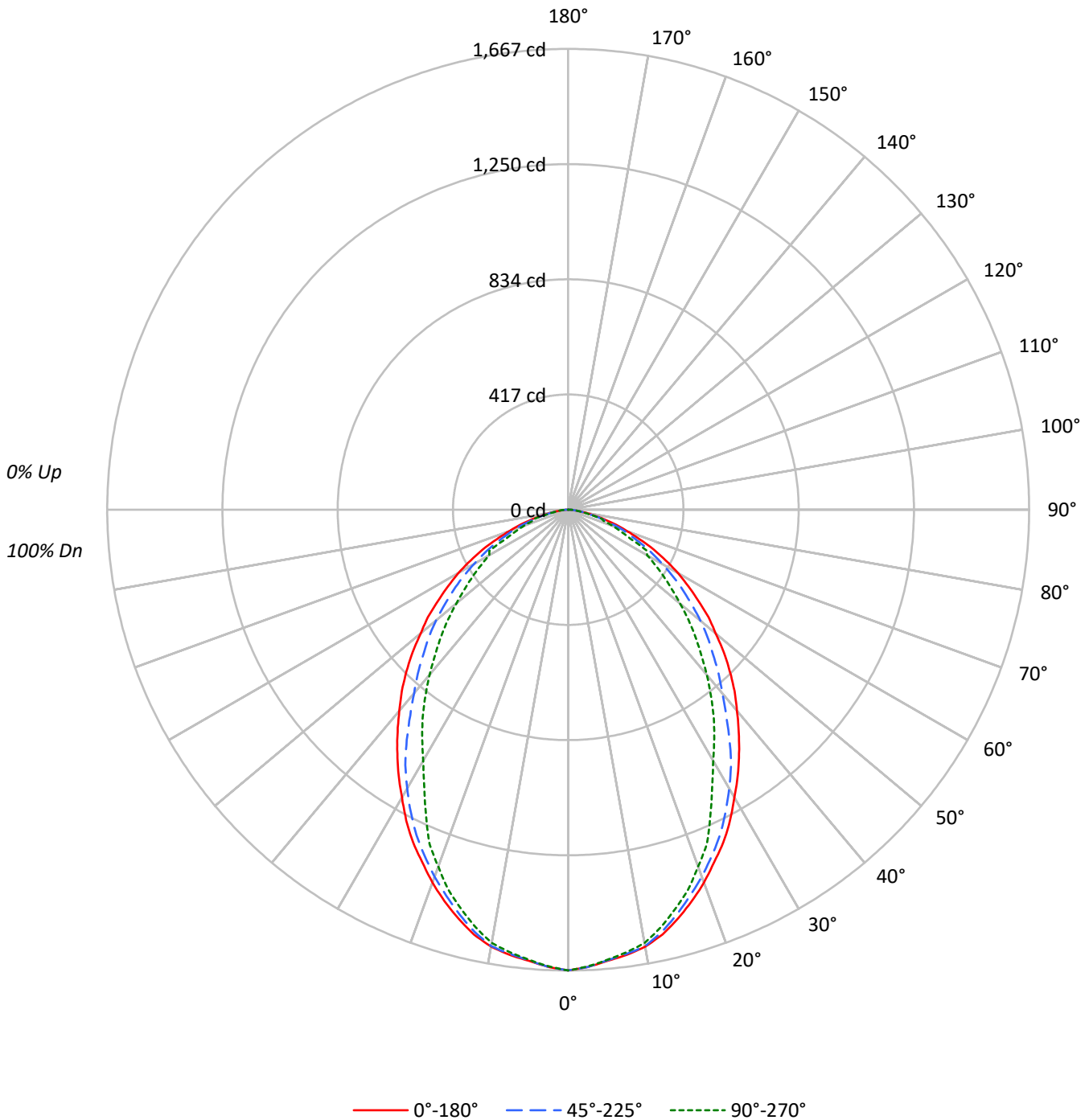
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562336

CATALOG NUMBER: FSR-24-4-LD4-1STD-35-UNV-93-84-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562336

CATALOG NUMBER: FSR-24-4-LD4-1STD-35-UNV-93-84-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	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°	2243	2243	2243
5°	2212	2209	2207
10°	2193	2190	2175
15°	2134	2112	2083
20°	2055	2022	1967
25°	1971	1928	1808
30°	1868	1808	1629
35°	1769	1671	1507
40°	1668	1523	1371
45°	1573	1408	1239
50°	1456	1307	1105
55°	1347	1184	990
60°	1234	1058	887
65°	1086	926	785
70°	895	811	667
75°	711	621	651
80°	478	448	418
85°	298	357	417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1573 cd/sqm



TEST NUMBER: P562336

CATALOG NUMBER: FSR-24-4-LD4-1STD-35-UNV-93-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.1	4.7
10°-20°	425.8	13.0
20°-30°	589.5	18.0
30°-40°	628.6	19.2
40°-50°	573.4	17.5
50°-60°	449.2	13.7
60°-70°	292.8	8.9
70°-80°	129.7	4.0
80°-90°	27.8	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°	1170.4	35.8
0°-40°	1799.0	55.0
0°-60°	2821.7	86.2
0°-90°	3272.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3272.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1667	1667	1667	1667	1667	
5°	1638	1636	1636	1634	1634	155
15°	1532	1532	1516	1501	1495	431
25°	1328	1320	1299	1252	1218	609
35°	1077	1069	1017	940	917	673
45°	827	809	740	678	651	637
55°	574	557	505	445	422	515
65°	341	322	291	297	247	336
75°	137	127	120	114	125	147
85°	19	21	23	25	27	27
90°	0	0	0	0	0	

TEST NUMBER: P562336

CATALOG NUMBER: FSR-24-4-LD4-1STD-35-UNV-93-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1666.7	1666.7	1666.7	1666.7	1666.7
2.5°	1655.2	1655.2	1655.2	1653.2	1653.2
5°	1637.8	1635.9	1635.9	1634.0	1634.0
7.5°	1624.3	1622.4	1620.5	1618.5	1614.7
10°	1605.1	1605.1	1603.1	1593.5	1591.6
12.5°	1574.2	1572.3	1564.6	1551.1	1547.2
15°	1531.8	1531.8	1516.4	1501.0	1495.2
17.5°	1485.6	1483.7	1464.4	1449.0	1441.3
20°	1435.5	1431.6	1412.4	1387.3	1373.8
22.5°	1379.6	1379.6	1356.5	1323.7	1310.2
25°	1327.6	1319.9	1298.7	1252.4	1217.8
27.5°	1267.9	1256.3	1233.2	1167.7	1127.2
30°	1202.3	1196.6	1163.8	1079.0	1048.2
32.5°	1140.7	1131.1	1096.4	1007.7	982.7
35°	1077.1	1069.4	1017.4	940.3	917.2
37.5°	1013.5	1003.9	938.4	876.7	847.8
40°	949.9	938.4	867.1	811.2	780.4
42.5°	890.2	874.8	805.4	745.7	711.0
45°	826.6	809.3	739.9	678.2	651.3
47.5°	763.0	747.6	684.0	620.4	589.6
50°	695.6	682.1	624.3	560.7	528.0
52.5°	639.7	618.5	562.6	499.1	472.1
55°	574.2	556.9	504.8	445.1	422.0
57.5°	514.5	497.1	449.0	393.1	373.8
60°	458.6	433.5	393.1	344.9	329.5
62.5°	396.9	377.7	343.0	302.5	321.8
65°	341.0	321.8	291.0	296.7	246.6
67.5°	279.4	269.8	242.8	215.8	208.1
70°	227.4	215.8	206.2	177.3	169.6
72.5°	181.1	169.6	156.1	140.7	134.9
75°	136.8	127.2	119.5	113.7	125.2
77.5°	94.4	90.6	84.8	79.0	77.1
80°	61.7	59.7	57.8	55.9	54.0
82.5°	36.6	36.6	36.6	36.6	36.6
85°	19.3	21.2	23.1	25.0	27.0
87.5°	11.6	11.6	13.5	15.4	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)