

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: P562410

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562410
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-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 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: 3326.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

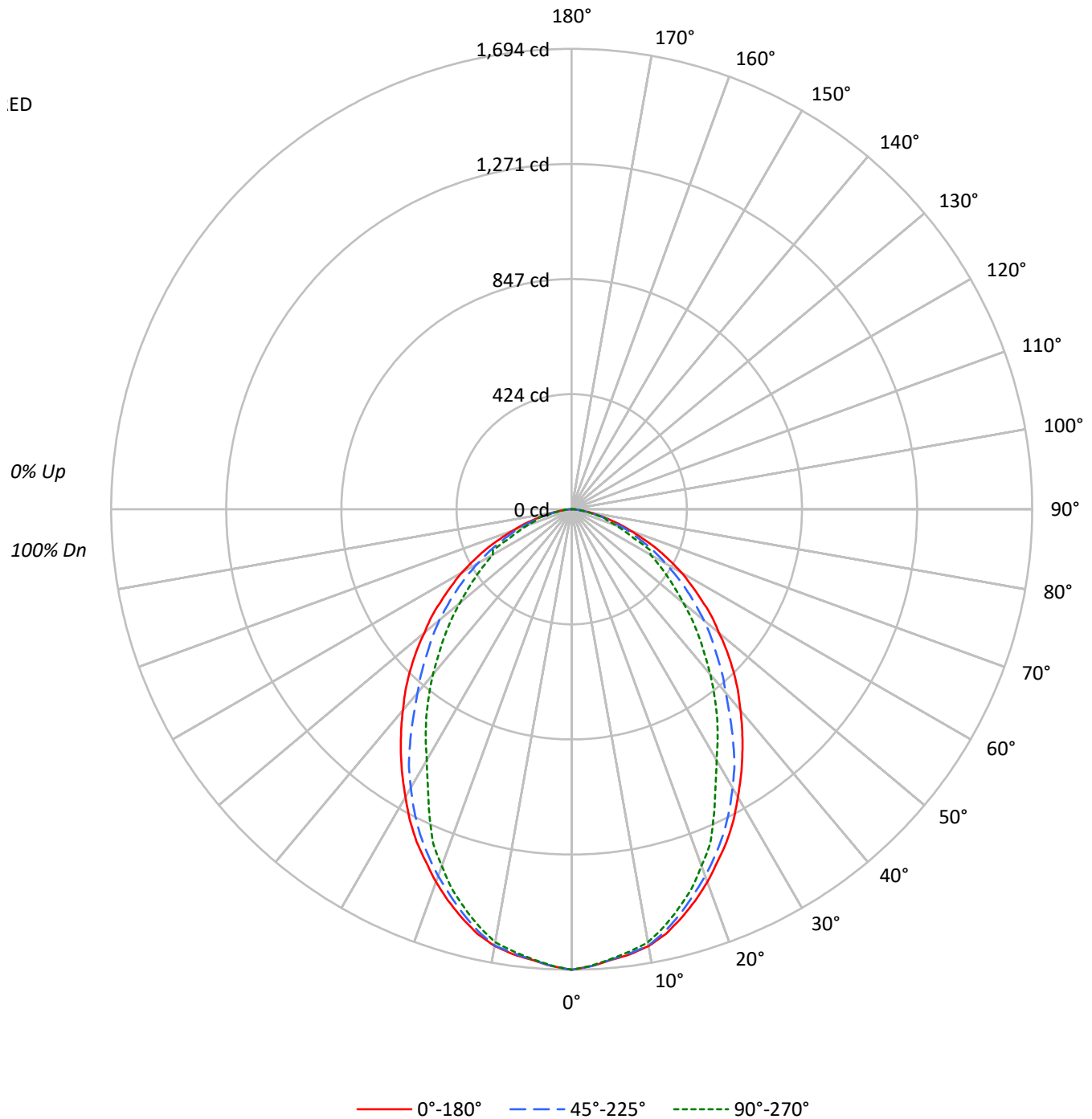
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562410

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562410

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-94-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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2280	2280	2280
5°	2249	2246	2243
10°	2229	2226	2210
15°	2169	2147	2117
20°	2089	2056	2000
25°	2003	1960	1838
30°	1899	1838	1655
35°	1798	1699	1531
40°	1696	1548	1393
45°	1599	1431	1260
50°	1480	1328	1123
55°	1369	1204	1006
60°	1255	1075	901
65°	1104	942	798
70°	909	825	678
75°	723	631	662
80°	486	456	425
85°	303	363	423

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1599 cd/sqm



TEST NUMBER: P562410

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.7	4.7
10°-20°	432.8	13.0
20°-30°	599.2	18.0
30°-40°	638.9	19.2
40°-50°	582.9	17.5
50°-60°	456.7	13.7
60°-70°	297.6	8.9
70°-80°	131.9	4.0
80°-90°	28.3	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°	1189.7	35.8
0°-40°	1828.7	55.0
0°-60°	2868.2	86.2
0°-90°	3326.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3326.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1694	1694	1694	1694	1694	
5°	1665	1663	1663	1661	1661	158
15°	1557	1557	1541	1526	1520	438
25°	1350	1342	1320	1273	1238	620
35°	1095	1087	1034	956	932	684
45°	840	823	752	689	662	647
55°	584	566	513	452	429	524
65°	347	327	296	302	251	342
75°	139	129	121	116	127	149
85°	20	22	24	26	27	27
90°	0	0	0	0	0	



TEST NUMBER: P562410

CATALOG NUMBER: FSR-24-4-LD4-1STD-40-UNV-93-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1694.2	1694.2	1694.2	1694.2	1694.2
2.5°	1682.5	1682.5	1682.5	1680.5	1680.5
5°	1664.8	1662.9	1662.9	1660.9	1660.9
7.5°	1651.1	1649.2	1647.2	1645.3	1641.3
10°	1631.5	1631.5	1629.6	1619.8	1617.8
12.5°	1600.2	1598.2	1590.4	1576.7	1572.8
15°	1557.1	1557.1	1541.4	1525.8	1519.9
17.5°	1510.1	1508.1	1488.6	1472.9	1465.1
20°	1459.2	1455.3	1435.7	1410.2	1396.5
22.5°	1402.4	1402.4	1378.9	1345.6	1331.9
25°	1349.5	1341.7	1320.1	1273.1	1237.9
27.5°	1288.8	1277.0	1253.5	1186.9	1145.8
30°	1222.2	1216.3	1183.0	1096.8	1065.5
32.5°	1159.5	1149.7	1114.5	1024.4	998.9
35°	1094.9	1087.0	1034.2	955.8	932.3
37.5°	1030.2	1020.4	953.9	891.2	861.8
40°	965.6	953.9	881.4	824.6	793.2
42.5°	904.9	889.2	818.7	758.0	722.7
45°	840.3	822.6	752.1	689.4	662.0
47.5°	775.6	760.0	695.3	630.7	599.3
50°	707.1	693.4	634.6	570.0	536.7
52.5°	650.3	628.7	571.9	507.3	479.9
55°	583.7	566.0	513.2	452.4	428.9
57.5°	523.0	505.3	456.4	399.6	380.0
60°	466.2	440.7	399.6	350.6	334.9
62.5°	403.5	383.9	348.6	307.5	327.1
65°	346.7	327.1	295.8	301.6	250.7
67.5°	284.0	274.2	246.8	219.4	211.5
70°	231.1	219.4	209.6	180.2	172.4
72.5°	184.1	172.4	158.6	143.0	137.1
75°	139.1	129.3	121.4	115.6	127.3
77.5°	96.0	92.1	86.2	80.3	78.3
80°	62.7	60.7	58.8	56.8	54.8
82.5°	37.2	37.2	37.2	37.2	37.2
85°	19.6	21.5	23.5	25.5	27.4
87.5°	11.8	11.8	13.7	15.7	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)