

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: P590578

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590578
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3LO-40-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4434.0 lumens
Efficiency: N/A
Efficacy: 126.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

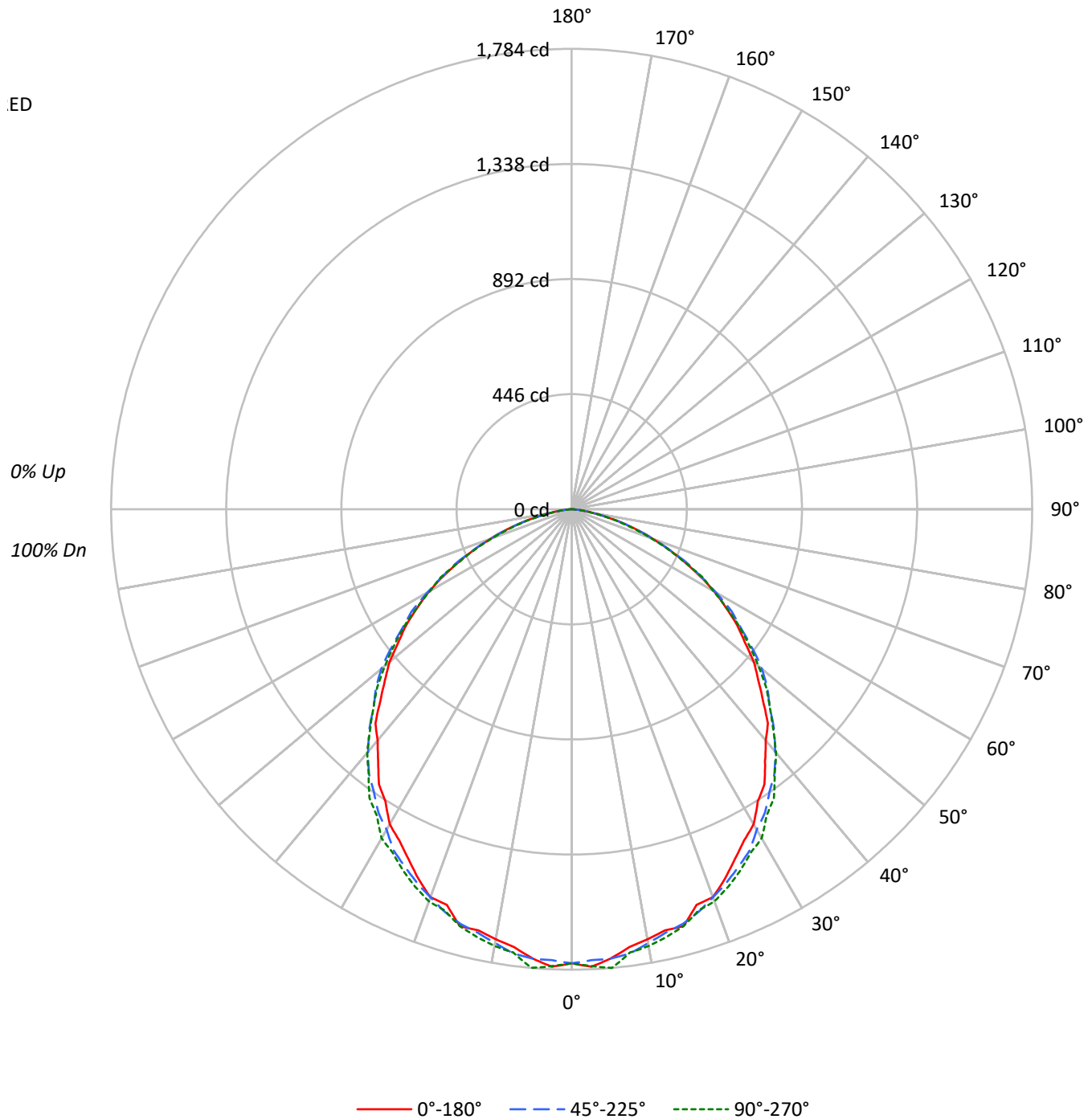
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590578

CATALOG NUMBER: FSR-24-2-LD4-3LO-40-UNV-93-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590578

CATALOG NUMBER: FSR-24-2-LD4-3LO-40-UNV-93-94-EDD

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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4734	4734	4734
5°	4719	4720	4820
10°	4623	4663	4696
15°	4659	4634	4660
20°	4581	4581	4629
25°	4440	4537	4587
30°	4379	4456	4575
35°	4276	4388	4486
40°	4109	4307	4326
45°	3985	4127	4133
50°	3854	4028	3951
55°	3673	3744	3717
60°	3434	3468	3406
65°	3062	3140	3040
70°	2627	2637	2563
75°	2080	2076	1995
80°	1395	1356	1302
85°	756	750	701

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4233 cd/sqm

TEST NUMBER: P590578

CATALOG NUMBER: FSR-24-2-LD4-3LO-40-UNV-93-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.5	3.7
10°-20°	469.0	10.6
20°-30°	702.7	15.8
30°-40°	832.8	18.8
40°-50°	834.4	18.8
50°-60°	708.2	16.0
60°-70°	477.5	10.8
70°-80°	209.8	4.7
80°-90°	34.1	0.8
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°	1337.2	30.2
0°-40°	2170.0	48.9
0°-60°	3712.6	83.7
0°-90°	4434.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4434.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1759	1759	1759	1759	1759	
5°	1747	1743	1748	1742	1784	165
15°	1672	1653	1663	1672	1673	466
25°	1495	1504	1528	1548	1545	691
35°	1302	1305	1336	1367	1366	808
45°	1047	1067	1084	1112	1086	810
55°	783	778	798	792	792	696
65°	481	474	493	474	478	478
75°	200	196	200	186	192	214
85°	24	24	24	24	23	36
90°	0	0	0	0	0	



TEST NUMBER: P590578

CATALOG NUMBER: FSR-24-2-LD4-3LO-40-UNV-93-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1759.3	1759.3	1759.3	1759.3	1759.3
2.5°	1774.5	1761.1	1748.6	1763.2	1772.0
5°	1746.8	1742.7	1747.5	1742.3	1784.3
7.5°	1710.9	1726.6	1735.7	1730.0	1732.5
10°	1691.8	1686.4	1706.6	1720.7	1718.6
12.5°	1671.4	1679.6	1680.7	1695.9	1697.3
15°	1672.5	1653.2	1663.4	1672.1	1672.8
17.5°	1607.6	1628.5	1635.5	1655.3	1630.7
20°	1599.6	1584.4	1599.6	1619.8	1616.6
22.5°	1550.8	1533.7	1566.4	1584.4	1583.3
25°	1495.3	1503.5	1528.1	1548.0	1544.9
27.5°	1446.7	1456.3	1491.3	1518.7	1501.0
30°	1409.3	1404.5	1434.0	1458.5	1472.2
32.5°	1342.2	1359.5	1394.0	1418.3	1405.4
35°	1301.6	1305.4	1335.7	1366.6	1365.6
37.5°	1230.5	1248.4	1290.9	1299.5	1291.6
40°	1169.8	1187.8	1226.2	1235.5	1231.6
42.5°	1125.1	1128.3	1161.2	1171.9	1154.8
45°	1047.2	1066.7	1084.4	1112.4	1086.0
47.5°	980.8	989.9	1028.1	1035.6	1021.7
50°	920.7	923.8	962.2	952.9	943.8
52.5°	845.0	858.4	880.0	878.2	867.5
55°	782.8	777.5	798.0	792.5	792.3
57.5°	708.0	717.1	733.9	725.3	711.4
60°	638.1	638.3	644.4	634.7	632.8
62.5°	560.2	562.9	564.2	552.2	571.7
65°	480.9	474.5	493.1	474.3	477.5
67.5°	408.0	411.1	409.3	397.5	402.1
70°	333.9	338.0	335.1	321.6	325.7
72.5°	266.2	261.2	264.4	247.6	255.3
75°	200.1	196.0	199.7	185.6	191.9
77.5°	136.3	139.5	137.2	129.7	134.0
80°	90.0	87.5	87.5	83.1	84.0
82.5°	52.5	50.0	49.3	47.9	50.0
85°	24.5	23.9	24.3	23.6	22.7
87.5°	8.9	9.1	9.1	8.6	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)