

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: P562802

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562802
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-LD4-2LO-50-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5105.0 lumens
Efficiency: N/A
Efficacy: 109.1 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

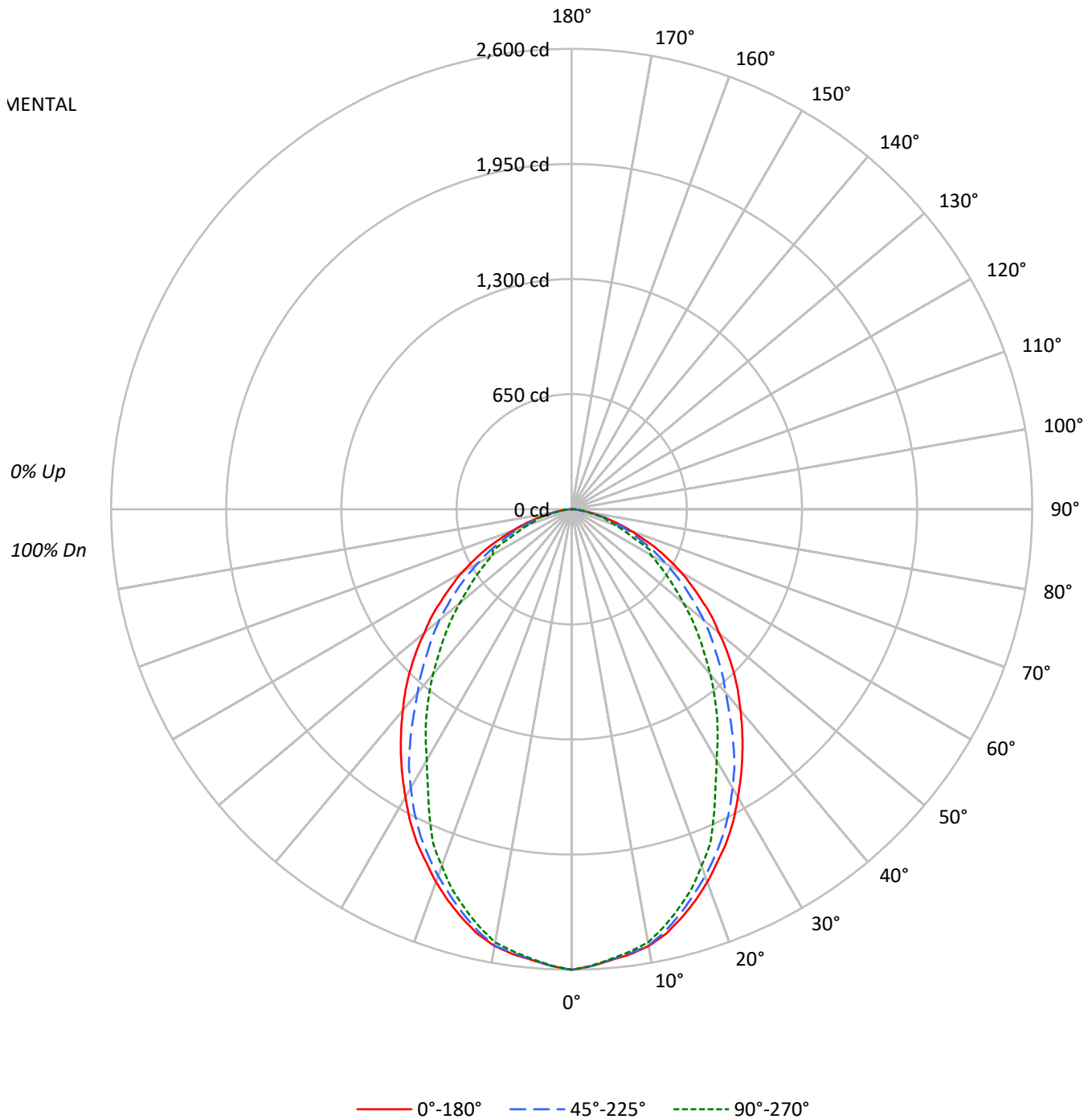
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562802

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-80-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562802

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-80-85-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°	3499	3499	3499
5°	3451	3447	3443
10°	3421	3417	3393
15°	3329	3296	3250
20°	3207	3155	3069
25°	3075	3008	2821
30°	2914	2821	2541
35°	2760	2607	2350
40°	2603	2376	2138
45°	2454	2197	1933
50°	2272	2039	1724
55°	2102	1848	1544
60°	1925	1650	1383
65°	1694	1445	1225
70°	1395	1266	1041
75°	1109	969	1016
80°	745	699	652
85°	465	557	650

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2454 cd/sqm



TEST NUMBER: P562802

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-80-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.1	4.7
10°-20°	664.3	13.0
20°-30°	919.7	18.0
30°-40°	980.7	19.2
40°-50°	894.7	17.5
50°-60°	700.9	13.7
60°-70°	456.8	8.9
70°-80°	202.4	4.0
80°-90°	43.5	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°	1826.1	35.8
0°-40°	2806.8	55.0
0°-60°	4402.3	86.2
0°-90°	5105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2600	2600	2600	2600	2600	
5°	2555	2552	2552	2549	2549	243
15°	2390	2390	2366	2342	2333	672
25°	2071	2059	2026	1954	1900	951
35°	1680	1668	1587	1467	1431	1051
45°	1290	1263	1154	1058	1016	993
55°	896	869	788	694	658	804
65°	532	502	454	463	385	524
75°	213	198	186	177	195	229
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



TEST NUMBER: P562802

CATALOG NUMBER: FSR-24-4-LD4-2LO-50-UNV-80-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2600.4	2600.4	2600.4	2600.4	2600.4
2.5°	2582.4	2582.4	2582.4	2579.4	2579.4
5°	2555.3	2552.3	2552.3	2549.3	2549.3
7.5°	2534.3	2531.3	2528.3	2525.3	2519.2
10°	2504.2	2504.2	2501.2	2486.2	2483.2
12.5°	2456.1	2453.1	2441.1	2420.0	2414.0
15°	2390.0	2390.0	2365.9	2341.9	2332.9
17.5°	2317.8	2314.8	2284.8	2260.7	2248.7
20°	2239.7	2233.7	2203.6	2164.5	2143.5
22.5°	2152.5	2152.5	2116.4	2065.3	2044.3
25°	2071.3	2059.3	2026.2	1954.1	1900.0
27.5°	1978.1	1960.1	1924.0	1821.8	1758.7
30°	1875.9	1866.9	1815.8	1683.5	1635.4
32.5°	1779.7	1764.7	1710.6	1572.3	1533.2
35°	1680.5	1668.5	1587.3	1467.1	1431.0
37.5°	1581.3	1566.3	1464.1	1367.9	1322.8
40°	1482.1	1464.1	1352.8	1265.6	1217.5
42.5°	1388.9	1364.8	1256.6	1163.4	1109.3
45°	1289.7	1262.6	1154.4	1058.2	1016.1
47.5°	1190.5	1166.4	1067.2	968.0	919.9
50°	1085.3	1064.2	974.0	874.8	823.7
52.5°	998.1	965.0	877.8	778.6	736.5
55°	895.9	868.8	787.6	694.4	658.4
57.5°	802.7	775.6	700.5	613.3	583.2
60°	715.5	676.4	613.3	538.1	514.1
62.5°	619.3	589.2	535.1	472.0	502.0
65°	532.1	502.0	453.9	463.0	384.8
67.5°	435.9	420.9	378.8	336.7	324.7
70°	354.7	336.7	321.7	276.6	264.6
72.5°	282.6	264.6	243.5	219.5	210.4
75°	213.4	198.4	186.4	177.4	195.4
77.5°	147.3	141.3	132.3	123.3	120.3
80°	96.2	93.2	90.2	87.2	84.2
82.5°	57.1	57.1	57.1	57.1	57.1
85°	30.1	33.1	36.1	39.1	42.1
87.5°	18.0	18.0	21.0	24.1	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)