

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: P562977

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562977
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-LD4-2STD-40-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7899.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

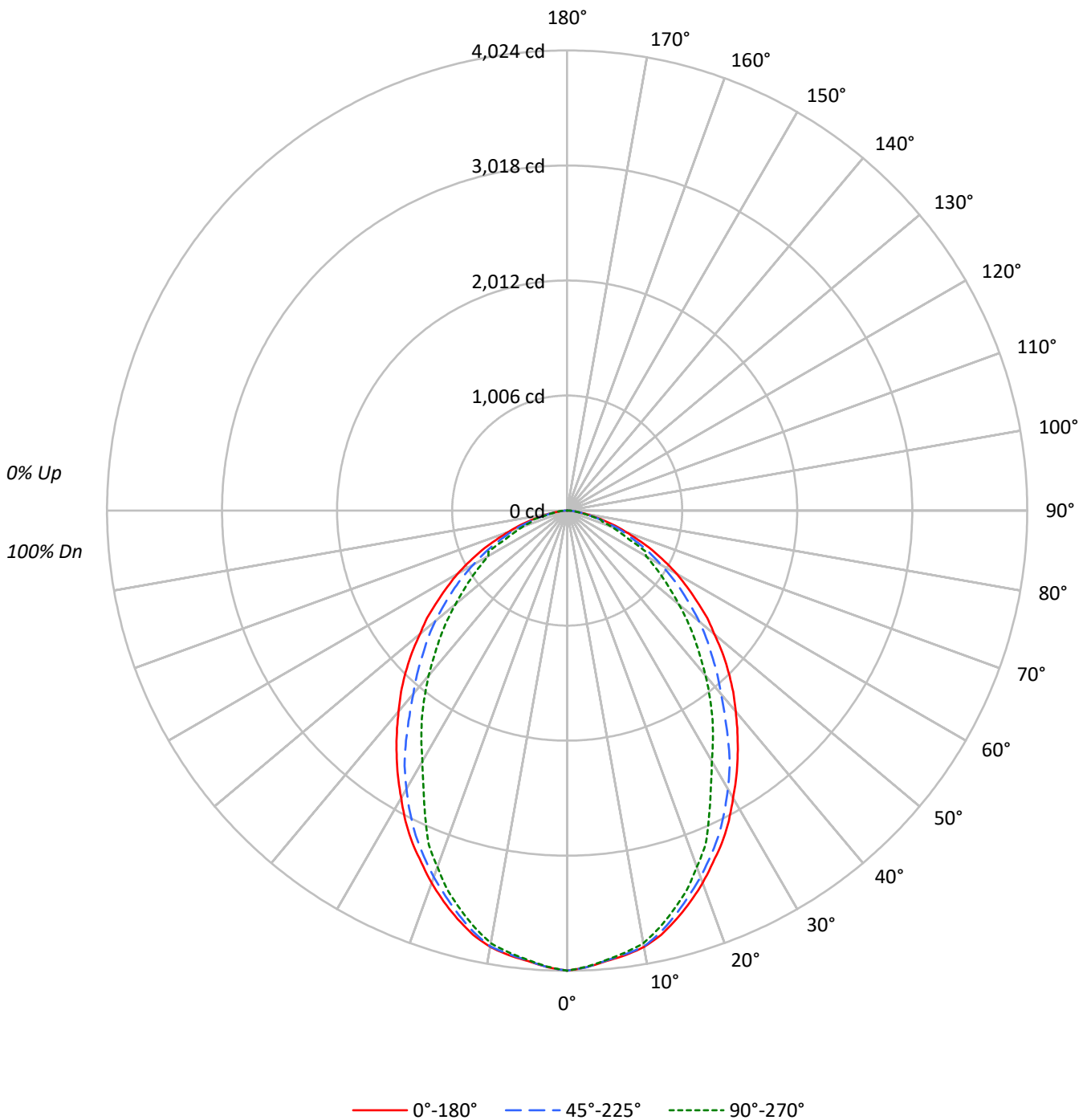
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562977

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562977

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-93-84-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	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°	5414	5414	5414
5°	5340	5334	5328
10°	5294	5288	5249
15°	5151	5099	5028
20°	4962	4882	4749
25°	4758	4654	4364
30°	4510	4365	3931
35°	4271	4034	3637
40°	4028	3677	3309
45°	3797	3399	2992
50°	3515	3155	2668
55°	3252	2859	2390
60°	2979	2553	2140
65°	2621	2236	1896
70°	2159	1958	1610
75°	1717	1499	1572
80°	1154	1081	1009
85°	718	861	1005

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3797 cd/sqm



TEST NUMBER: P562977

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.5	4.7
10°-20°	1027.9	13.0
20°-30°	1423.1	18.0
30°-40°	1517.4	19.2
40°-50°	1384.3	17.5
50°-60°	1084.5	13.7
60°-70°	706.8	8.9
70°-80°	313.2	4.0
80°-90°	67.2	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°	2825.5	35.8
0°-40°	4343.0	55.0
0°-60°	6811.8	86.2
0°-90°	7899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4024	4024	4024	4024	4024	
5°	3954	3949	3949	3945	3945	375
15°	3698	3698	3661	3624	3610	1040
25°	3205	3186	3135	3024	2940	1471
35°	2600	2582	2456	2270	2214	1626
45°	1996	1954	1786	1637	1572	1537
55°	1386	1344	1219	1074	1019	1243
65°	823	777	702	716	595	811
75°	330	307	288	274	302	354
85°	46	51	56	60	65	65
90°	0	0	0	0	0	



TEST NUMBER: P562977

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4023.6	4023.6	4023.6	4023.6	4023.6
2.5°	3995.7	3995.7	3995.7	3991.1	3991.1
5°	3953.9	3949.2	3949.2	3944.6	3944.6
7.5°	3921.3	3916.7	3912.0	3907.4	3898.1
10°	3874.8	3874.8	3870.1	3846.9	3842.2
12.5°	3800.4	3795.7	3777.1	3744.5	3735.2
15°	3698.0	3698.0	3660.8	3623.6	3609.7
17.5°	3586.4	3581.7	3535.2	3498.0	3479.4
20°	3465.5	3456.1	3409.6	3349.2	3316.6
22.5°	3330.6	3330.6	3274.7	3195.7	3163.1
25°	3205.0	3186.4	3135.2	3023.5	2939.8
27.5°	3060.8	3032.9	2977.0	2818.9	2721.2
30°	2902.6	2888.7	2809.6	2604.9	2530.5
32.5°	2753.8	2730.5	2646.8	2432.8	2372.3
35°	2600.3	2581.6	2456.1	2270.0	2214.2
37.5°	2446.7	2423.5	2265.3	2116.5	2046.7
40°	2293.2	2265.3	2093.2	1958.3	1883.9
42.5°	2149.0	2111.8	1944.4	1800.2	1716.4
45°	1995.5	1953.7	1786.2	1637.4	1572.2
47.5°	1842.0	1804.8	1651.3	1497.8	1423.4
50°	1679.2	1646.7	1507.1	1353.6	1274.5
52.5°	1544.3	1493.2	1358.3	1204.8	1139.6
55°	1386.2	1344.3	1218.7	1074.5	1018.7
57.5°	1242.0	1200.1	1083.8	948.9	902.4
60°	1107.1	1046.6	948.9	832.6	795.4
62.5°	958.2	911.7	828.0	730.3	776.8
65°	823.3	776.8	702.4	716.3	595.4
67.5°	674.5	651.2	586.1	521.0	502.4
70°	548.9	521.0	497.7	427.9	409.3
72.5°	437.3	409.3	376.8	339.6	325.6
75°	330.3	307.0	288.4	274.4	302.4
77.5°	227.9	218.6	204.7	190.7	186.1
80°	148.9	144.2	139.5	134.9	130.2
82.5°	88.4	88.4	88.4	88.4	88.4
85°	46.5	51.2	55.8	60.5	65.1
87.5°	27.9	27.9	32.6	37.2	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)