

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: P561781

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561781
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-12-4-LD4-2STD-40-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6502.0 lumens
Efficiency: N/A
Efficacy: 97.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

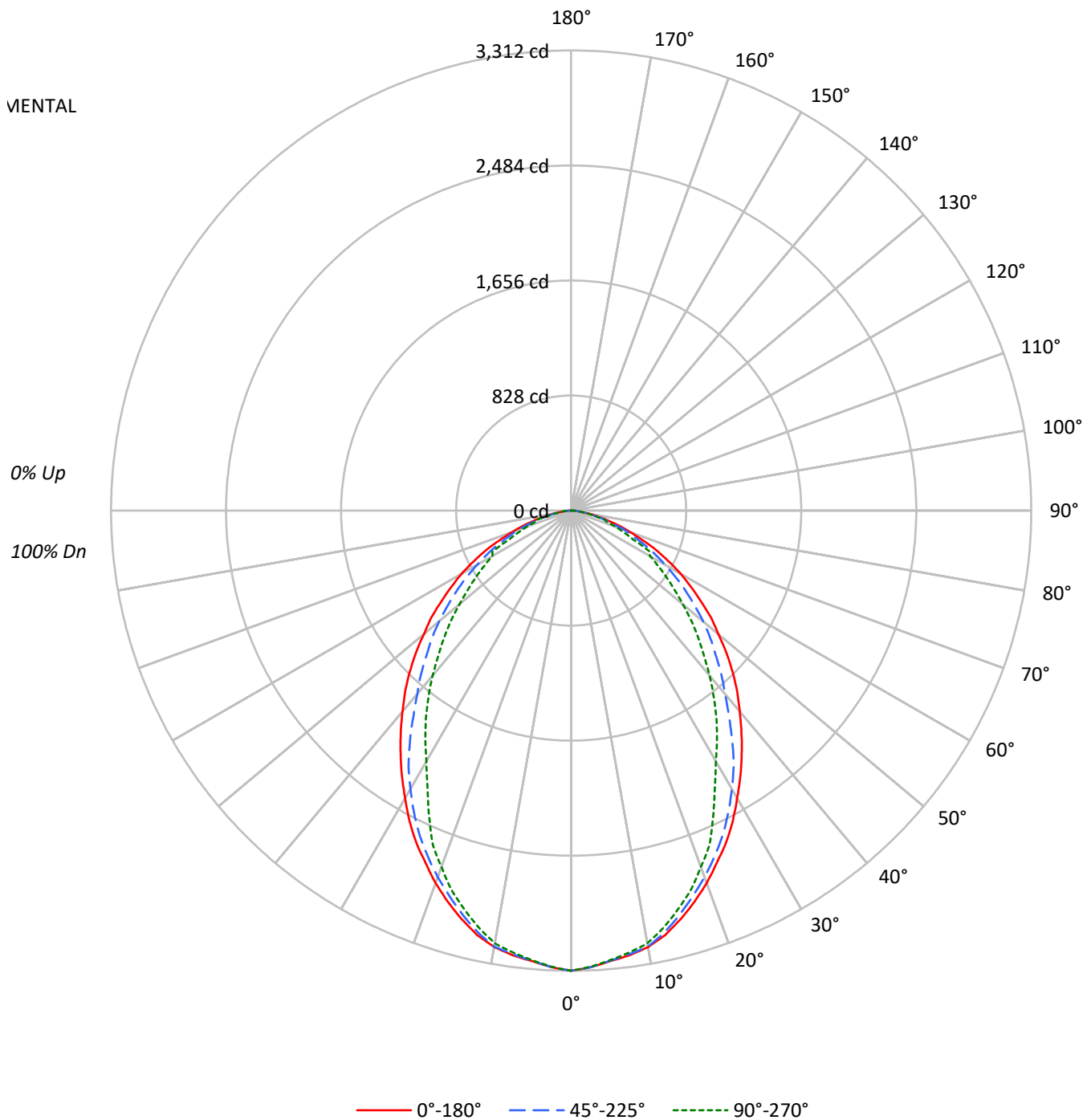
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561781

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561781

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-80-86-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																												
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°	8913	8913	8913
5°	8792	8781	8771
10°	8715	8705	8642
15°	8480	8395	8278
20°	8169	8037	7818
25°	7833	7663	7185
30°	7424	7186	6472
35°	7031	6641	5987
40°	6631	6053	5447
45°	6251	5595	4925
50°	5786	5194	4392
55°	5353	4707	3934
60°	4905	4204	3524
65°	4315	3682	3121
70°	3555	3223	2651
75°	2827	2468	2588
80°	1898	1781	1661
85°	1183	1417	1655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6251 cd/sqm



TEST NUMBER: P561781

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	308.3	4.7
10°-20°	846.1	13.0
20°-30°	1171.4	18.0
30°-40°	1249.1	19.2
40°-50°	1139.5	17.5
50°-60°	892.7	13.7
60°-70°	581.8	8.9
70°-80°	257.8	4.0
80°-90°	55.3	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°	2325.8	35.8
0°-40°	3574.9	55.0
0°-60°	5607.1	86.2
0°-90°	6502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6502.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3312	3312	3312	3312	3312	
5°	3255	3251	3251	3247	3247	309
15°	3044	3044	3013	2983	2971	856
25°	2638	2623	2581	2489	2420	1211
35°	2140	2125	2022	1868	1823	1338
45°	1643	1608	1470	1348	1294	1265
55°	1141	1107	1003	884	838	1023
65°	678	639	578	590	490	668
75°	272	253	237	226	249	291
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



TEST NUMBER: P561781

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3312.0	3312.0	3312.0	3312.0	3312.0
2.5°	3289.1	3289.1	3289.1	3285.2	3285.2
5°	3254.6	3250.8	3250.8	3246.9	3246.9
7.5°	3227.8	3224.0	3220.1	3216.3	3208.7
10°	3189.5	3189.5	3185.7	3166.5	3162.7
12.5°	3128.2	3124.4	3109.1	3082.3	3074.6
15°	3044.0	3044.0	3013.4	2982.7	2971.3
17.5°	2952.1	2948.3	2910.0	2879.4	2864.0
20°	2852.6	2844.9	2806.6	2756.8	2730.0
22.5°	2741.5	2741.5	2695.6	2630.5	2603.7
25°	2638.1	2622.8	2580.7	2488.8	2419.9
27.5°	2519.4	2496.5	2450.5	2320.3	2239.9
30°	2389.3	2377.8	2312.7	2144.2	2082.9
32.5°	2266.7	2247.6	2178.7	2002.5	1952.8
35°	2140.4	2125.1	2021.7	1868.5	1822.6
37.5°	2014.0	1994.9	1864.7	1742.2	1684.7
40°	1887.7	1864.7	1723.0	1612.0	1550.7
42.5°	1769.0	1738.3	1600.5	1481.8	1412.9
45°	1642.6	1608.2	1470.3	1347.8	1294.2
47.5°	1516.3	1485.6	1359.3	1232.9	1171.7
50°	1382.2	1355.4	1240.6	1114.2	1049.1
52.5°	1271.2	1229.1	1118.1	991.7	938.1
55°	1141.0	1106.6	1003.2	884.5	838.5
57.5°	1022.3	987.9	892.1	781.1	742.8
60°	911.3	861.5	781.1	685.4	654.7
62.5°	788.8	750.5	681.6	601.1	639.4
65°	677.7	639.4	578.2	589.7	490.1
67.5°	555.2	536.1	482.4	428.8	413.5
70°	451.8	428.8	409.7	352.3	336.9
72.5°	359.9	336.9	310.1	279.5	268.0
75°	271.9	252.7	237.4	225.9	248.9
77.5°	187.6	180.0	168.5	157.0	153.2
80°	122.5	118.7	114.9	111.0	107.2
82.5°	72.7	72.7	72.7	72.7	72.7
85°	38.3	42.1	45.9	49.8	53.6
87.5°	23.0	23.0	26.8	30.6	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)