

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: P561340

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561340
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-LD4-2HI-35-UNV-80-96-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

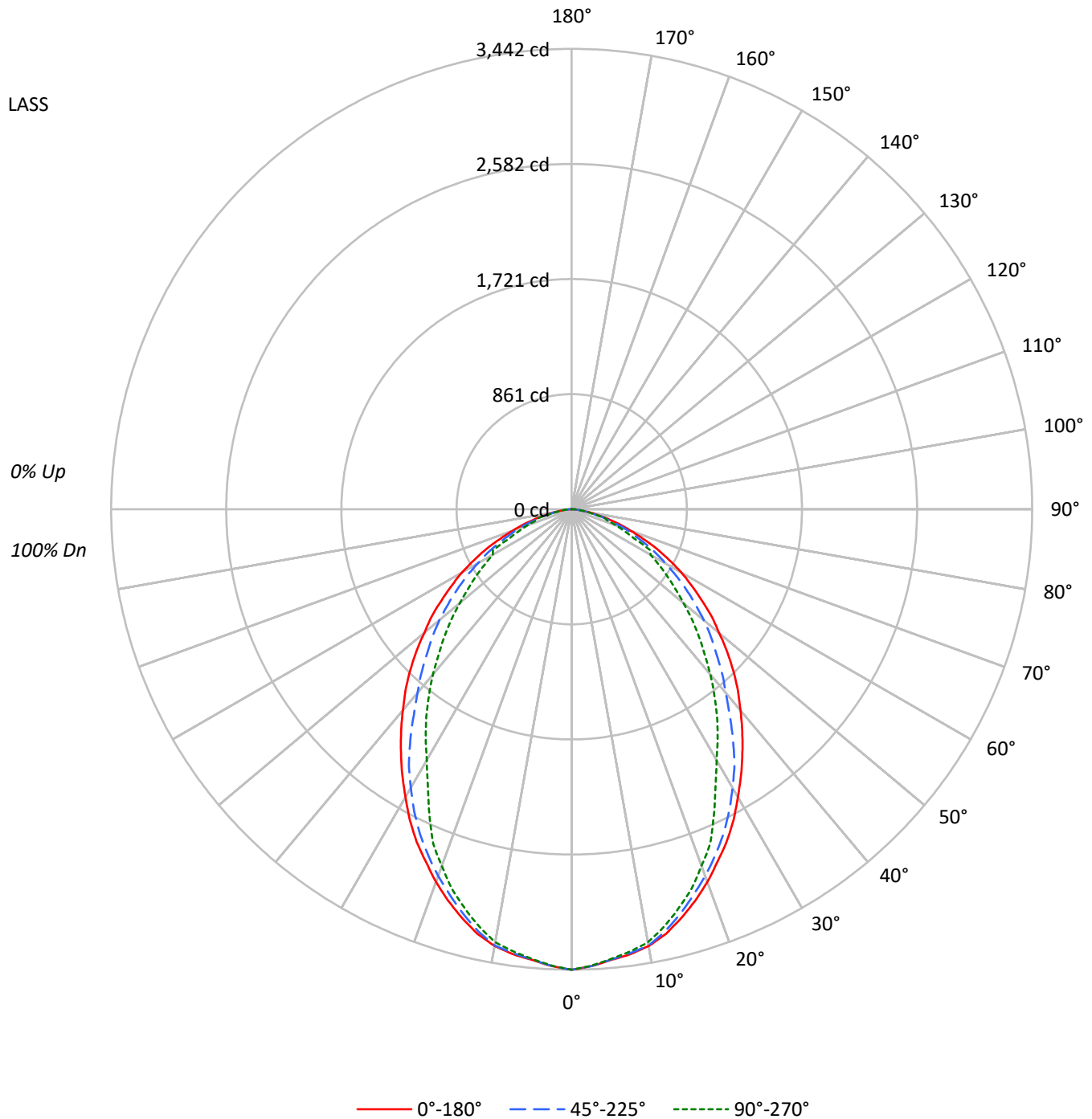
Lumens per Lamp: N/A
Luminaire Lumens: 6758.0 lumens
Efficiency: N/A
Efficacy: 78.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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: P561340
CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561340

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-96-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°	9263	9263	9263
5°	9138	9127	9116
10°	9058	9048	8982
15°	8814	8725	8603
20°	8491	8354	8126
25°	8141	7964	7468
30°	7716	7469	6727
35°	7308	6903	6223
40°	6892	6291	5662
45°	6497	5816	5119
50°	6015	5398	4565
55°	5564	4892	4089
60°	5098	4370	3662
65°	4485	3826	3244
70°	3695	3350	2755
75°	2938	2565	2690
80°	1974	1850	1726
85°	1229	1476	1720

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6497 cd/sqm



TEST NUMBER: P561340

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.4	4.7
10°-20°	879.4	13.0
20°-30°	1217.5	18.0
30°-40°	1298.2	19.2
40°-50°	1184.4	17.5
50°-60°	927.9	13.7
60°-70°	604.7	8.9
70°-80°	267.9	4.0
80°-90°	57.5	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°	2417.4	35.8
0°-40°	3715.6	55.0
0°-60°	5827.8	86.2
0°-90°	6758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6758.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3442	3442	3442	3442	3442	
5°	3383	3379	3379	3375	3375	321
15°	3164	3164	3132	3100	3088	889
25°	2742	2726	2682	2587	2515	1259
35°	2225	2209	2101	1942	1894	1391
45°	1707	1672	1528	1401	1345	1315
55°	1186	1150	1043	919	872	1064
65°	704	665	601	613	509	694
75°	283	263	247	235	259	303
85°	40	44	48	52	56	55
90°	0	0	0	0	0	

TEST NUMBER: P561340

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3442.4	3442.4	3442.4	3442.4	3442.4
2.5°	3418.6	3418.6	3418.6	3414.6	3414.6
5°	3382.7	3378.8	3378.8	3374.8	3374.8
7.5°	3354.9	3350.9	3346.9	3342.9	3335.0
10°	3315.1	3315.1	3311.1	3291.2	3287.2
12.5°	3251.4	3247.4	3231.5	3203.7	3195.7
15°	3163.9	3163.9	3132.0	3100.2	3088.2
17.5°	3068.3	3064.4	3024.6	2992.7	2976.8
20°	2964.9	2956.9	2917.1	2865.4	2837.5
22.5°	2849.5	2849.5	2801.7	2734.0	2706.2
25°	2742.0	2726.1	2682.3	2586.8	2515.2
27.5°	2618.6	2594.8	2547.0	2411.7	2328.1
30°	2483.3	2471.4	2403.7	2228.6	2165.0
32.5°	2356.0	2336.1	2264.4	2081.4	2029.6
35°	2224.6	2208.7	2101.3	1942.1	1894.3
37.5°	2093.3	2073.4	1938.1	1810.8	1751.1
40°	1962.0	1938.1	1790.9	1675.5	1611.8
42.5°	1838.6	1806.8	1663.5	1540.1	1468.5
45°	1707.3	1671.5	1528.2	1400.9	1345.1
47.5°	1576.0	1544.1	1412.8	1281.5	1217.8
50°	1436.7	1408.8	1289.4	1158.1	1090.4
52.5°	1321.3	1277.5	1162.1	1030.7	975.0
55°	1185.9	1150.1	1042.7	919.3	871.6
57.5°	1062.6	1026.8	927.3	811.9	772.1
60°	947.2	895.4	811.9	712.4	680.5
62.5°	819.8	780.0	708.4	624.8	664.6
65°	704.4	664.6	600.9	612.9	509.4
67.5°	577.1	557.2	501.4	445.7	429.8
70°	469.6	445.7	425.8	366.1	350.2
72.5°	374.1	350.2	322.4	290.5	278.6
75°	282.6	262.7	246.7	234.8	258.7
77.5°	195.0	187.0	175.1	163.2	159.2
80°	127.4	123.4	119.4	115.4	111.4
82.5°	75.6	75.6	75.6	75.6	75.6
85°	39.8	43.8	47.8	51.7	55.7
87.5°	23.9	23.9	27.9	31.8	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)