

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: P562538

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562538
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-LD4-2HI-35-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8045.0 lumens
Efficiency: N/A
Efficacy: 93.1 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

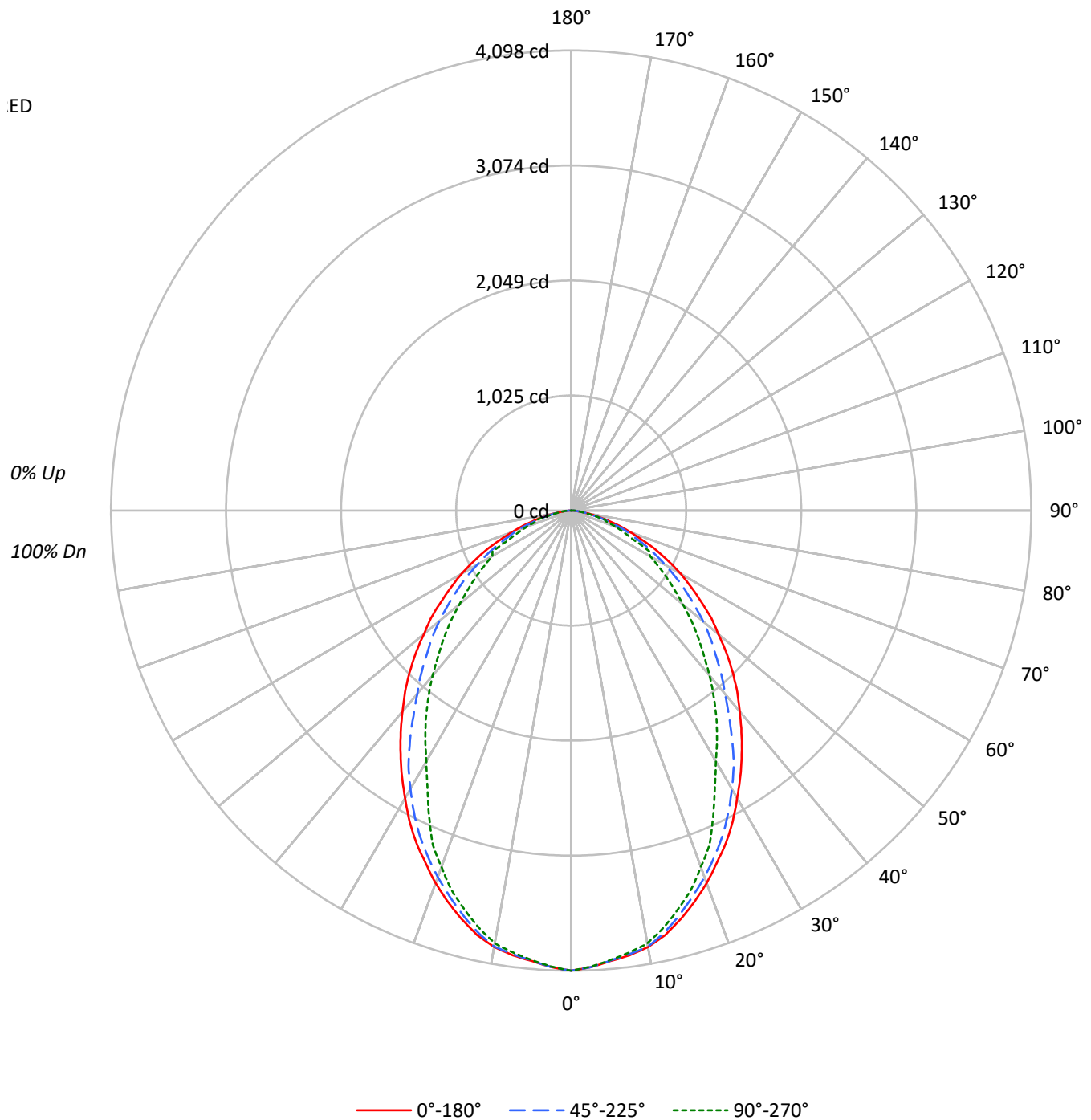
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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	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°	5514	5514	5514
5°	5439	5432	5426
10°	5392	5385	5346
15°	5246	5194	5121
20°	5054	4972	4837
25°	4846	4740	4445
30°	4593	4446	4004
35°	4350	4109	3704
40°	4102	3744	3370
45°	3867	3462	3047
50°	3580	3213	2717
55°	3312	2912	2434
60°	3034	2601	2180
65°	2670	2278	1931
70°	2199	1994	1640
75°	1749	1527	1601
80°	1175	1101	1028
85°	732	878	1024

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3867 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.5	4.7
10°-20°	1046.9	13.0
20°-30°	1449.4	18.0
30°-40°	1545.5	19.2
40°-50°	1409.9	17.5
50°-60°	1104.6	13.7
60°-70°	719.9	8.9
70°-80°	318.9	4.0
80°-90°	68.5	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°	2877.8	35.8
0°-40°	4423.2	55.0
0°-60°	6937.7	86.2
0°-90°	8045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4098	4098	4098	4098	4098	
5°	4027	4022	4022	4018	4018	382
15°	3766	3766	3728	3691	3676	1059
25°	3264	3245	3193	3079	2994	1499
35°	2648	2629	2501	2312	2255	1656
45°	2032	1990	1819	1668	1601	1566
55°	1412	1369	1241	1094	1038	1266
65°	839	791	715	730	606	826
75°	336	313	294	280	308	360
85°	47	52	57	62	66	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4098.0	4098.0	4098.0	4098.0	4098.0
2.5°	4069.6	4069.6	4069.6	4064.9	4064.9
5°	4027.0	4022.2	4022.2	4017.5	4017.5
7.5°	3993.8	3989.1	3984.3	3979.6	3970.1
10°	3946.4	3946.4	3941.7	3918.0	3913.2
12.5°	3870.6	3865.9	3846.9	3813.8	3804.3
15°	3766.4	3766.4	3728.5	3690.6	3676.4
17.5°	3652.7	3647.9	3600.6	3562.7	3543.7
20°	3529.5	3520.0	3472.7	3411.1	3377.9
22.5°	3392.1	3392.1	3335.3	3254.7	3221.6
25°	3264.2	3245.2	3193.1	3079.4	2994.2
27.5°	3117.3	3088.9	3032.1	2871.0	2771.5
30°	2956.3	2942.0	2861.5	2653.1	2577.2
32.5°	2804.7	2781.0	2695.7	2477.8	2416.2
35°	2648.3	2629.4	2501.4	2311.9	2255.1
37.5°	2492.0	2468.3	2307.2	2155.6	2084.5
40°	2335.6	2307.2	2131.9	1994.5	1918.7
42.5°	2188.8	2150.9	1980.3	1833.4	1748.2
45°	2032.4	1989.8	1819.2	1667.6	1601.3
47.5°	1876.1	1838.2	1681.8	1525.5	1449.7
50°	1710.3	1677.1	1535.0	1378.6	1298.1
52.5°	1572.9	1520.8	1383.4	1227.0	1160.7
55°	1411.8	1369.2	1241.2	1094.4	1037.5
57.5°	1264.9	1222.3	1103.9	966.5	919.1
60°	1127.5	1066.0	966.5	848.0	810.1
62.5°	975.9	928.6	843.3	743.8	791.2
65°	838.6	791.2	715.4	729.6	606.4
67.5°	687.0	663.3	596.9	530.6	511.7
70°	559.0	530.6	506.9	435.9	416.9
72.5°	445.3	416.9	383.7	345.8	331.6
75°	336.4	312.7	293.7	279.5	307.9
77.5°	232.1	222.7	208.5	194.2	189.5
80°	151.6	146.9	142.1	137.4	132.7
82.5°	90.0	90.0	90.0	90.0	90.0
85°	47.4	52.1	56.9	61.6	66.3
87.5°	28.4	28.4	33.2	37.9	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)