

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: P562667

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562667
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-50-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9875.0 lumens
Efficiency: N/A
Efficacy: 114.3 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

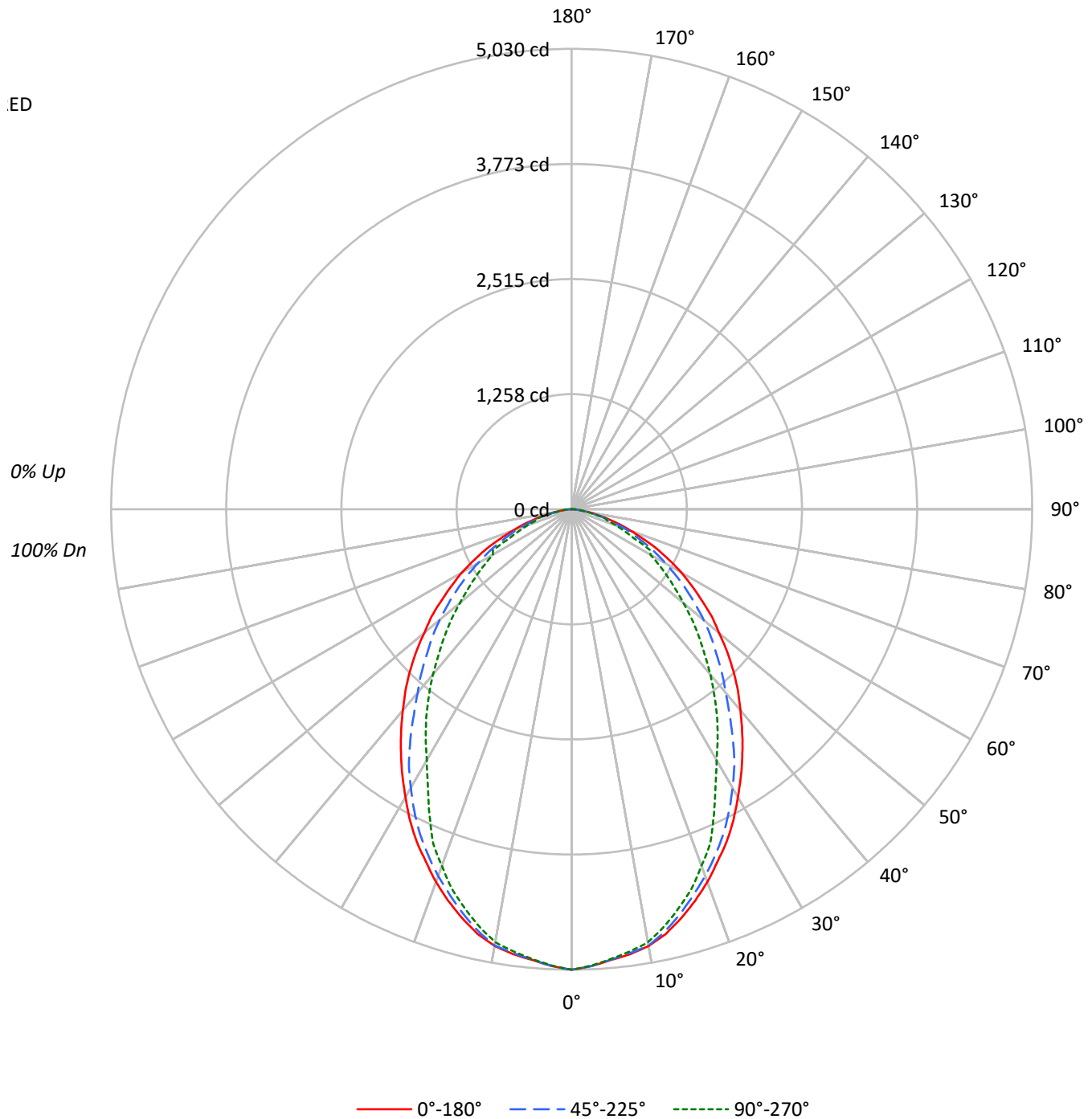
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	6768	6768	6768
5°	6676	6668	6660
10°	6618	6610	6563
15°	6440	6375	6286
20°	6203	6103	5937
25°	5948	5819	5456
30°	5638	5457	4915
35°	5339	5043	4547
40°	5035	4596	4137
45°	4747	4249	3740
50°	4394	3944	3335
55°	4065	3574	2987
60°	3724	3192	2676
65°	3277	2796	2370
70°	2699	2448	2013
75°	2146	1874	1965
80°	1442	1352	1261
85°	898	1078	1257

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4747 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	468.2	4.7
10°-20°	1285.1	13.0
20°-30°	1779.1	18.0
30°-40°	1897.0	19.2
40°-50°	1730.6	17.5
50°-60°	1355.8	13.7
60°-70°	883.6	8.9
70°-80°	391.5	4.0
80°-90°	84.1	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°	3532.4	35.8
0°-40°	5429.4	55.0
0°-60°	8515.8	86.2
0°-90°	9875.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9875.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5030	5030	5030	5030	5030	
5°	4943	4937	4937	4931	4931	469
15°	4623	4623	4577	4530	4513	1300
25°	4007	3983	3920	3780	3675	1839
35°	3251	3228	3070	2838	2768	2032
45°	2495	2442	2233	2047	1966	1922
55°	1733	1681	1524	1343	1274	1554
65°	1029	971	878	896	744	1014
75°	413	384	360	343	378	442
85°	58	64	70	76	81	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5030.2	5030.2	5030.2	5030.2	5030.2
2.5°	4995.3	4995.3	4995.3	4989.5	4989.5
5°	4943.0	4937.1	4937.1	4931.3	4931.3
7.5°	4902.3	4896.4	4890.6	4884.8	4873.2
10°	4844.1	4844.1	4838.3	4809.2	4803.4
12.5°	4751.1	4745.2	4722.0	4681.3	4669.6
15°	4623.1	4623.1	4576.6	4530.1	4512.6
17.5°	4483.6	4477.7	4419.6	4373.1	4349.8
20°	4332.4	4320.7	4262.6	4187.0	4146.3
22.5°	4163.7	4163.7	4093.9	3995.1	3954.4
25°	4006.7	3983.4	3919.5	3779.9	3675.2
27.5°	3826.4	3791.5	3721.8	3524.0	3401.9
30°	3628.7	3611.3	3512.4	3256.5	3163.5
32.5°	3442.6	3413.6	3308.9	3041.4	2965.8
35°	3250.7	3227.5	3070.5	2837.8	2768.1
37.5°	3058.8	3029.7	2832.0	2645.9	2558.7
40°	2866.9	2832.0	2616.9	2448.2	2355.2
42.5°	2686.6	2640.1	2430.8	2250.5	2145.8
45°	2494.7	2442.4	2233.1	2047.0	1965.6
47.5°	2302.8	2256.3	2064.4	1872.5	1779.5
50°	2099.3	2058.6	1884.1	1692.2	1593.4
52.5°	1930.7	1866.7	1698.1	1506.2	1424.7
55°	1732.9	1680.6	1523.6	1343.3	1273.5
57.5°	1552.7	1500.3	1355.0	1186.3	1128.2
60°	1384.0	1308.4	1186.3	1040.9	994.4
62.5°	1197.9	1139.8	1035.1	913.0	971.1
65°	1029.3	971.1	878.1	895.5	744.4
67.5°	843.2	814.1	732.7	651.3	628.0
70°	686.2	651.3	622.2	535.0	511.7
72.5°	546.6	511.7	471.0	424.5	407.1
75°	412.9	383.8	360.5	343.1	378.0
77.5°	284.9	273.3	255.9	238.4	232.6
80°	186.1	180.3	174.5	168.6	162.8
82.5°	110.5	110.5	110.5	110.5	110.5
85°	58.2	64.0	69.8	75.6	81.4
87.5°	34.9	34.9	40.7	46.5	52.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)