

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: P563437

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563437
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-LD4-3LO-50-UNV-93-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 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: 8918.0 lumens
Efficiency: N/A
Efficacy: 127.0 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

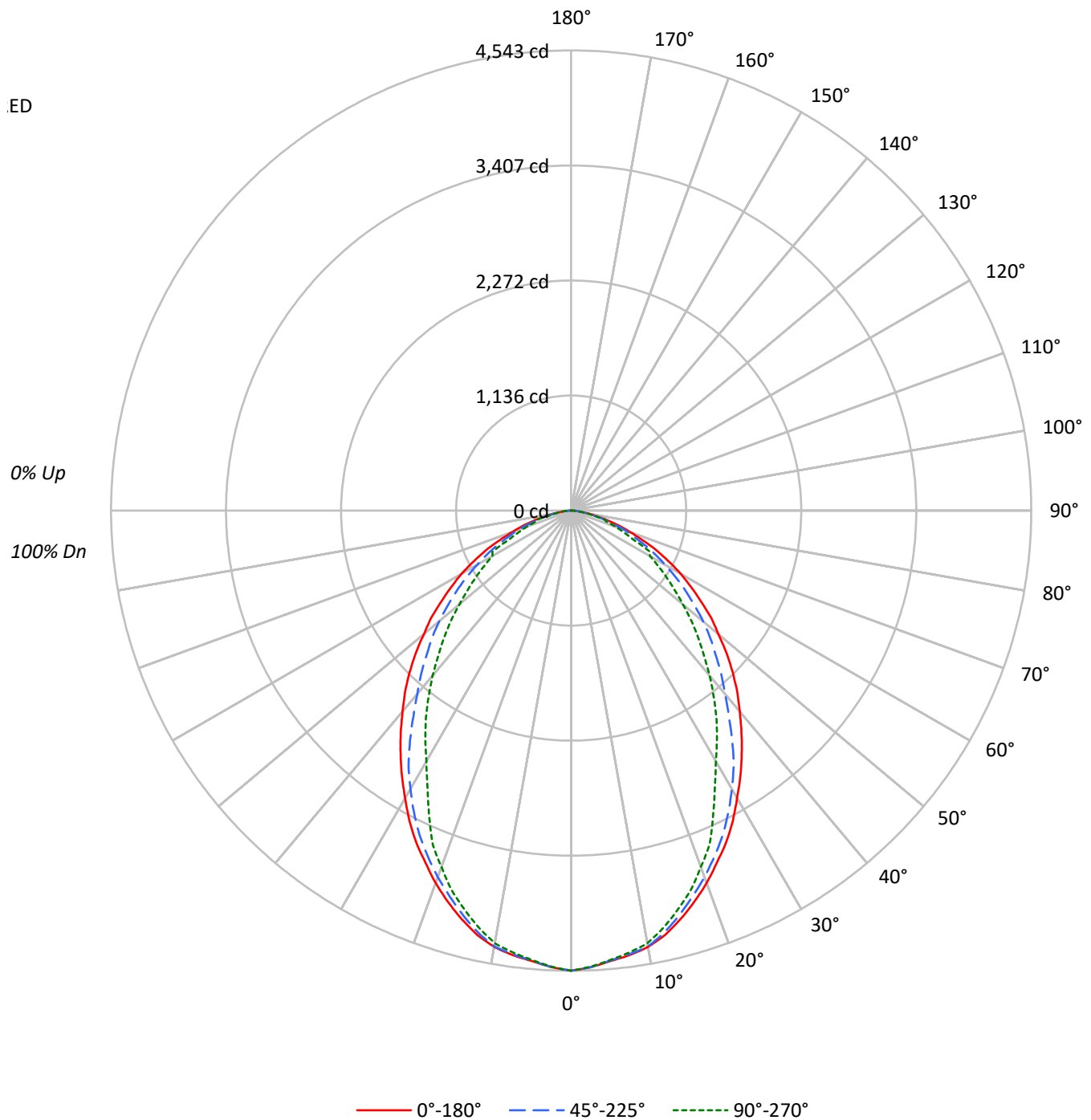
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6112	6112	6112
5°	6029	6022	6015
10°	5977	5970	5927
15°	5816	5757	5677
20°	5602	5512	5362
25°	5372	5255	4927
30°	5091	4928	4439
35°	4822	4555	4106
40°	4548	4151	3736
45°	4287	3837	3378
50°	3969	3562	3012
55°	3671	3228	2698
60°	3363	2883	2416
65°	2959	2525	2140
70°	2438	2210	1818
75°	1939	1693	1775
80°	1303	1221	1139
85°	810	973	1135

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4287 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	422.9	4.7
10°-20°	1160.5	13.0
20°-30°	1606.7	18.0
30°-40°	1713.2	19.2
40°-50°	1562.9	17.5
50°-60°	1224.4	13.7
60°-70°	798.0	8.9
70°-80°	353.6	4.0
80°-90°	75.9	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°	3190.0	35.8
0°-40°	4903.2	55.0
0°-60°	7690.5	86.2
0°-90°	8918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4543	4543	4543	4543	4543	
5°	4464	4459	4459	4453	4453	424
15°	4175	4175	4133	4091	4075	1174
25°	3618	3597	3540	3414	3319	1661
35°	2936	2915	2773	2563	2500	1835
45°	2253	2206	2017	1849	1775	1735
55°	1565	1518	1376	1213	1150	1404
65°	930	877	793	809	672	916
75°	373	347	326	310	341	400
85°	52	58	63	68	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4542.7	4542.7	4542.7	4542.7	4542.7
2.5°	4511.2	4511.2	4511.2	4505.9	4505.9
5°	4463.9	4458.7	4458.7	4453.4	4453.4
7.5°	4427.2	4421.9	4416.7	4411.4	4400.9
10°	4374.7	4374.7	4369.4	4343.1	4337.9
12.5°	4290.6	4285.4	4264.4	4227.6	4217.1
15°	4175.1	4175.1	4133.1	4091.1	4075.3
17.5°	4049.1	4043.8	3991.3	3949.3	3928.3
20°	3912.5	3902.0	3849.5	3781.2	3744.5
22.5°	3760.2	3760.2	3697.2	3607.9	3571.1
25°	3618.4	3597.4	3539.6	3413.6	3319.1
27.5°	3455.6	3424.1	3361.1	3182.5	3072.2
30°	3277.1	3261.3	3172.0	2940.9	2856.9
32.5°	3109.0	3082.7	2988.2	2746.6	2678.4
35°	2935.7	2914.7	2772.9	2562.8	2499.8
37.5°	2762.4	2736.1	2557.6	2389.5	2310.7
40°	2589.1	2557.6	2363.3	2211.0	2126.9
42.5°	2426.3	2384.3	2195.2	2032.4	1937.9
45°	2253.0	2205.7	2016.6	1848.6	1775.1
47.5°	2079.7	2037.7	1864.3	1691.0	1607.0
50°	1895.9	1859.1	1701.5	1528.2	1439.0
52.5°	1743.6	1685.8	1533.5	1360.2	1286.7
55°	1565.0	1517.7	1375.9	1213.1	1150.1
57.5°	1402.2	1354.9	1223.6	1071.3	1018.8
60°	1249.9	1181.6	1071.3	940.1	898.0
62.5°	1081.8	1029.3	934.8	824.5	877.0
65°	929.5	877.0	793.0	808.8	672.2
67.5°	761.5	735.2	661.7	588.2	567.2
70°	619.7	588.2	561.9	483.2	462.1
72.5°	493.7	462.1	425.4	383.4	367.6
75°	372.9	346.6	325.6	309.8	341.4
77.5°	257.3	246.8	231.1	215.3	210.1
80°	168.1	162.8	157.6	152.3	147.0
82.5°	99.8	99.8	99.8	99.8	99.8
85°	52.5	57.8	63.0	68.3	73.5
87.5°	31.5	31.5	36.8	42.0	47.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)