

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: P563879

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563879
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-LD4-4LO-35-UNV-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10951.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

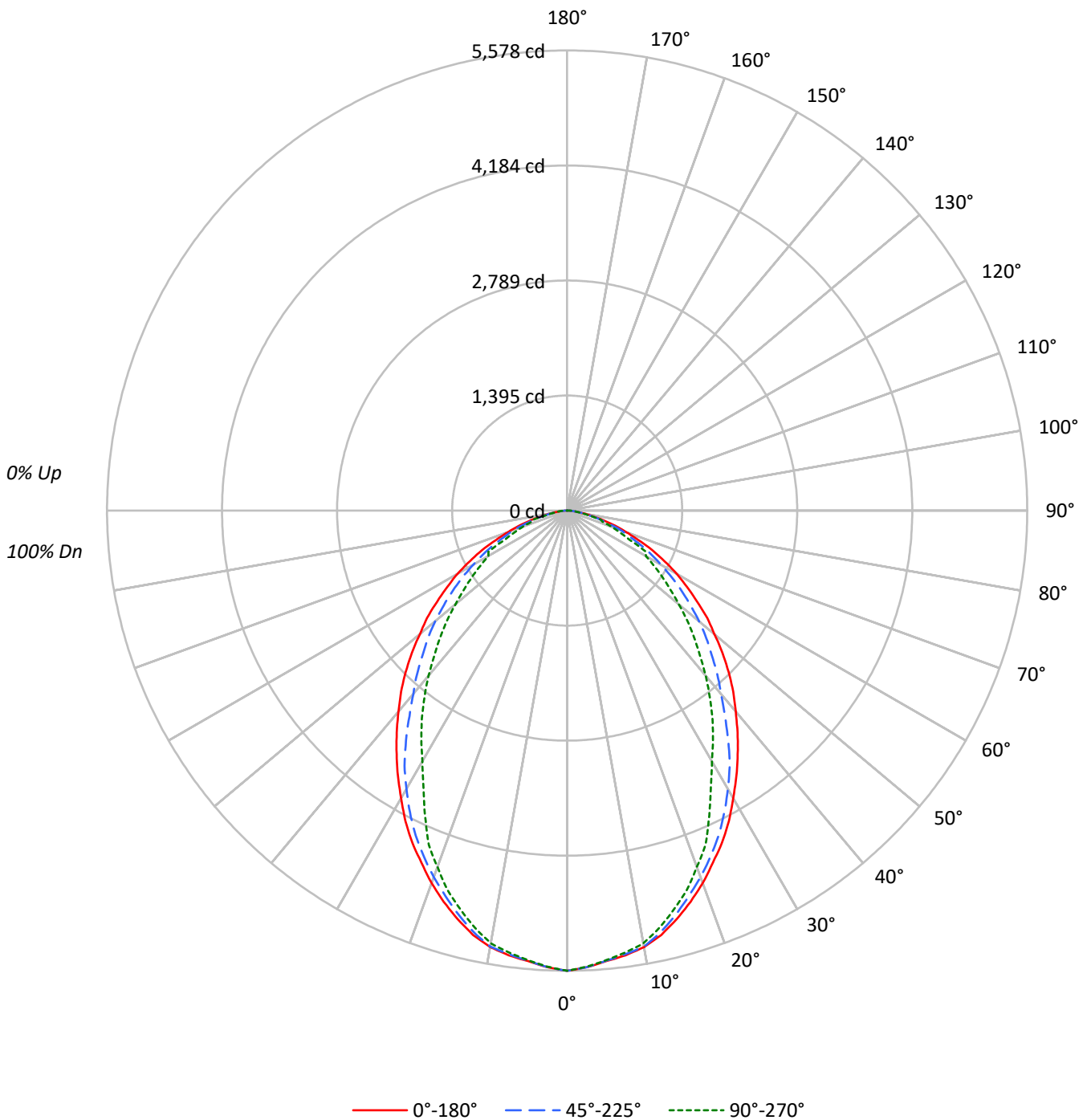
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7506	7506	7506
5°	7404	7395	7386
10°	7339	7331	7278
15°	7142	7070	6971
20°	6879	6768	6584
25°	6596	6453	6051
30°	6252	6052	5450
35°	5921	5593	5042
40°	5584	5097	4587
45°	5264	4712	4148
50°	4873	4374	3699
55°	4508	3963	3313
60°	4130	3540	2968
65°	3634	3100	2628
70°	2994	2714	2233
75°	2380	2078	2179
80°	1599	1499	1399
85°	996	1195	1394

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5264 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.3	4.7
10°-20°	1425.1	13.0
20°-30°	1972.9	18.0
30°-40°	2103.7	19.2
40°-50°	1919.2	17.5
50°-60°	1503.5	13.7
60°-70°	979.9	8.9
70°-80°	434.2	4.0
80°-90°	93.2	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°	3917.3	35.8
0°-40°	6021.0	55.0
0°-60°	9443.7	86.2
0°-90°	10951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5578	5578	5578	5578	5578	
5°	5482	5475	5475	5469	5469	520
15°	5127	5127	5075	5024	5004	1441
25°	4443	4418	4347	4192	4076	2040
35°	3605	3579	3405	3147	3070	2254
45°	2767	2708	2476	2270	2180	2131
55°	1922	1864	1690	1490	1412	1724
65°	1142	1077	974	993	826	1125
75°	458	426	400	380	419	491
85°	64	71	77	84	90	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5578.3	5578.3	5578.3	5578.3	5578.3
2.5°	5539.6	5539.6	5539.6	5533.2	5533.2
5°	5481.6	5475.1	5475.1	5468.7	5468.7
7.5°	5436.4	5430.0	5423.5	5417.1	5404.2
10°	5371.9	5371.9	5365.5	5333.2	5326.8
12.5°	5268.7	5262.3	5236.5	5191.4	5178.5
15°	5126.9	5126.9	5075.3	5023.7	5004.3
17.5°	4972.1	4965.6	4901.2	4849.6	4823.8
20°	4804.4	4791.5	4727.0	4643.2	4598.1
22.5°	4617.4	4617.4	4540.0	4430.4	4385.2
25°	4443.3	4417.5	4346.6	4191.8	4075.7
27.5°	4243.4	4204.7	4127.3	3908.0	3772.6
30°	4024.1	4004.8	3895.1	3611.4	3508.2
32.5°	3817.7	3785.5	3669.4	3372.8	3288.9
35°	3604.9	3579.1	3405.0	3147.1	3069.7
37.5°	3392.1	3359.9	3140.6	2934.2	2837.5
40°	3179.3	3140.6	2902.0	2715.0	2611.8
42.5°	2979.4	2927.8	2695.6	2495.7	2379.6
45°	2766.6	2708.5	2476.4	2270.0	2179.7
47.5°	2553.8	2502.2	2289.4	2076.5	1973.4
50°	2328.1	2282.9	2089.4	1876.6	1767.0
52.5°	2141.0	2070.1	1883.1	1670.3	1580.0
55°	1921.8	1863.7	1689.6	1489.7	1412.3
57.5°	1721.9	1663.8	1502.6	1315.6	1251.1
60°	1534.8	1451.0	1315.6	1154.4	1102.8
62.5°	1328.5	1264.0	1147.9	1012.5	1077.0
65°	1141.5	1077.0	973.8	993.1	825.5
67.5°	935.1	902.8	812.6	722.3	696.5
70°	761.0	722.3	690.0	593.3	567.5
72.5°	606.2	567.5	522.4	470.8	451.4
75°	457.9	425.6	399.8	380.5	419.2
77.5°	316.0	303.1	283.8	264.4	258.0
80°	206.4	199.9	193.5	187.0	180.6
82.5°	122.5	122.5	122.5	122.5	122.5
85°	64.5	70.9	77.4	83.8	90.3
87.5°	38.7	38.7	45.1	51.6	58.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)