

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: P563997

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563997
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-50-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11037.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

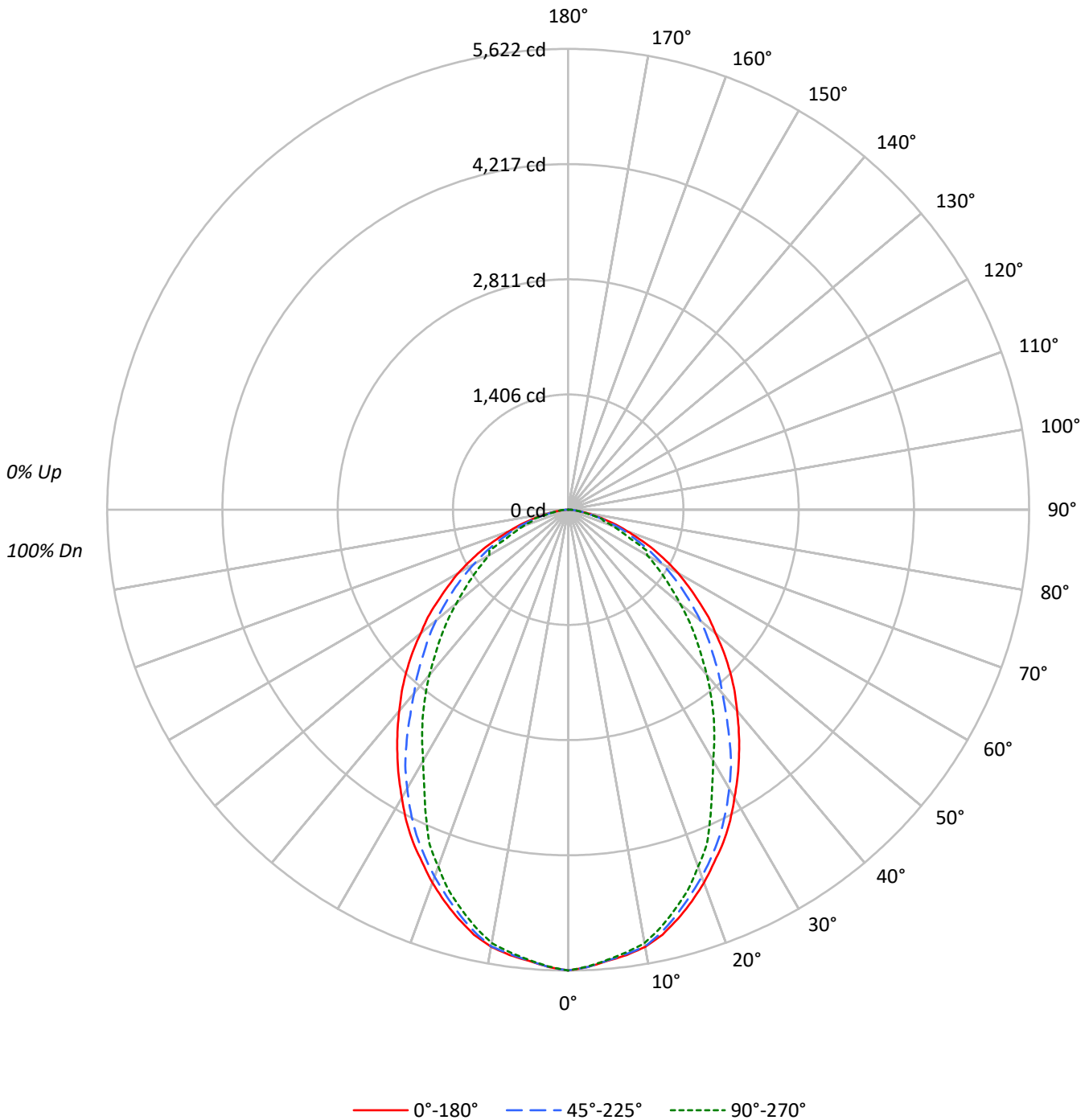
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7564	7564	7564
5°	7462	7453	7444
10°	7397	7388	7335
15°	7198	7125	7025
20°	6933	6822	6635
25°	6648	6504	6098
30°	6301	6099	5493
35°	5968	5637	5082
40°	5628	5137	4623
45°	5306	4749	4180
50°	4911	4408	3728
55°	4544	3995	3339
60°	4163	3568	2991
65°	3663	3124	2649
70°	3017	2736	2250
75°	2399	2095	2196
80°	1612	1511	1410
85°	1003	1204	1405

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5306 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	523.3	4.7
10°-20°	1436.3	13.0
20°-30°	1988.4	18.0
30°-40°	2120.2	19.2
40°-50°	1934.3	17.5
50°-60°	1515.4	13.7
60°-70°	987.6	8.9
70°-80°	437.6	4.0
80°-90°	94.0	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°	3948.0	35.8
0°-40°	6068.3	55.0
0°-60°	9517.9	86.2
0°-90°	11037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5622	5622	5622	5622	5622	
5°	5525	5518	5518	5512	5512	524
15°	5167	5167	5115	5063	5044	1453
25°	4478	4452	4381	4225	4108	2056
35°	3633	3607	3432	3172	3094	2271
45°	2788	2730	2496	2288	2197	2148
55°	1937	1878	1703	1501	1423	1737
65°	1150	1085	981	1001	832	1134
75°	462	429	403	384	422	495
85°	65	72	78	84	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5622.1	5622.1	5622.1	5622.1	5622.1
2.5°	5583.1	5583.1	5583.1	5576.6	5576.6
5°	5524.6	5518.1	5518.1	5511.6	5511.6
7.5°	5479.1	5472.6	5466.1	5459.6	5446.6
10°	5414.1	5414.1	5407.6	5375.1	5368.6
12.5°	5310.1	5303.6	5277.6	5232.1	5219.1
15°	5167.1	5167.1	5115.1	5063.1	5043.6
17.5°	5011.1	5004.6	4939.6	4887.7	4861.7
20°	4842.2	4829.2	4764.2	4679.7	4634.2
22.5°	4653.7	4653.7	4575.7	4465.2	4419.7
25°	4478.2	4452.2	4380.7	4224.7	4107.7
27.5°	4276.7	4237.7	4159.7	3938.7	3802.2
30°	4055.7	4036.2	3925.7	3639.7	3535.7
32.5°	3847.7	3815.2	3698.2	3399.3	3314.8
35°	3633.2	3607.2	3431.8	3171.8	3093.8
37.5°	3418.8	3386.3	3165.3	2957.3	2859.8
40°	3204.3	3165.3	2924.8	2736.3	2632.3
42.5°	3002.8	2950.8	2716.8	2515.3	2398.3
45°	2788.3	2729.8	2495.8	2287.8	2196.8
47.5°	2573.8	2521.8	2307.3	2092.9	1988.9
50°	2346.3	2300.8	2105.9	1891.4	1780.9
52.5°	2157.8	2086.4	1897.9	1683.4	1592.4
55°	1936.9	1878.4	1702.9	1501.4	1423.4
57.5°	1735.4	1676.9	1514.4	1325.9	1260.9
60°	1546.9	1462.4	1325.9	1163.4	1111.4
62.5°	1338.9	1273.9	1156.9	1020.4	1085.4
65°	1150.4	1085.4	981.4	1000.9	831.9
67.5°	942.4	909.9	818.9	727.9	702.0
70°	766.9	727.9	695.5	598.0	572.0
72.5°	611.0	572.0	526.5	474.5	455.0
75°	461.5	429.0	403.0	383.5	422.5
77.5°	318.5	305.5	286.0	266.5	260.0
80°	208.0	201.5	195.0	188.5	182.0
82.5°	123.5	123.5	123.5	123.5	123.5
85°	65.0	71.5	78.0	84.5	91.0
87.5°	39.0	39.0	45.5	52.0	58.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)