

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P309876

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA125-W2A-U-5700K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P309876
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L82765-RDP-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 5700K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1937.0 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

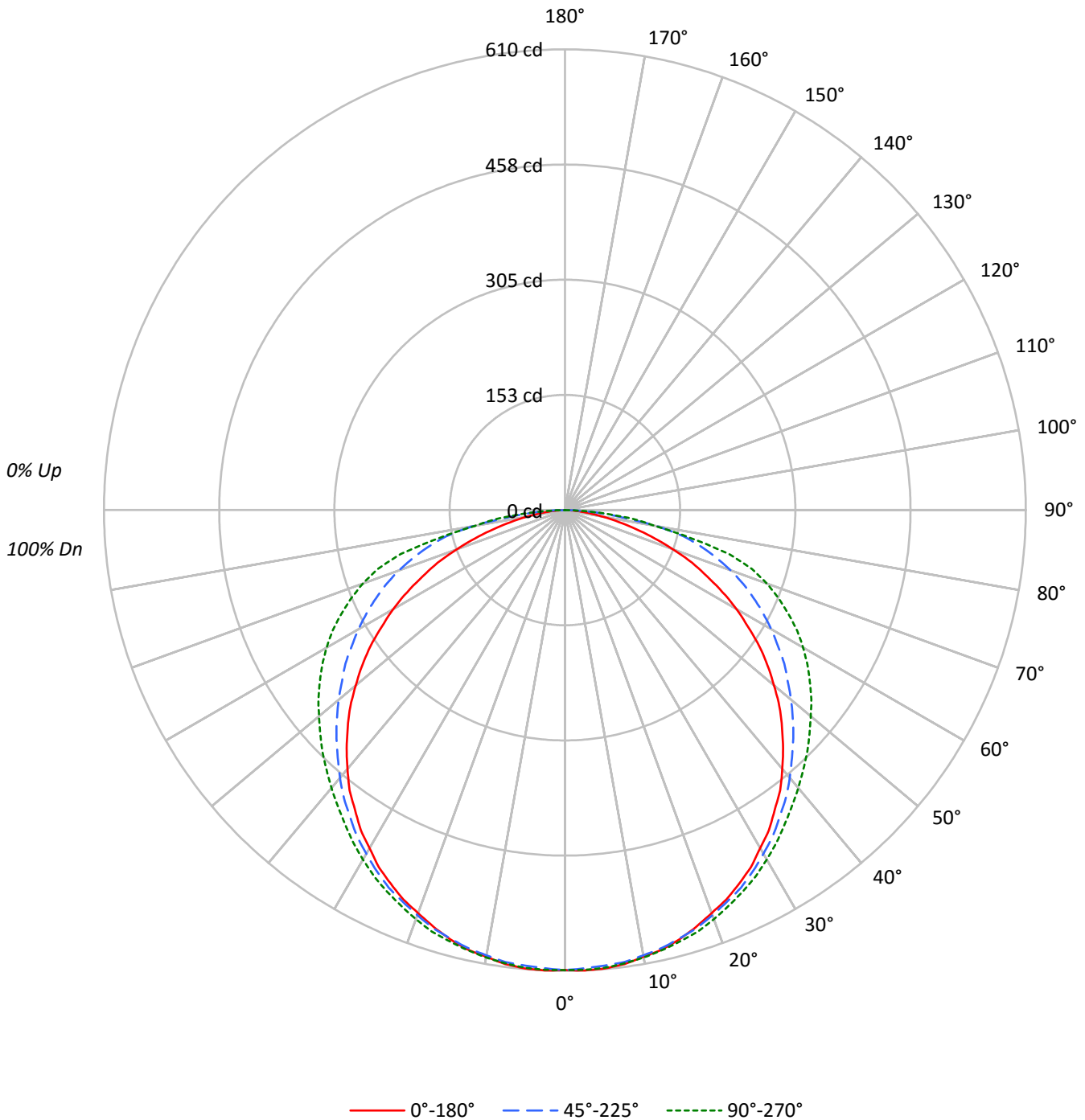
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	820	820	820
5°	823	818	821
10°	820	818	822
15°	819	818	823
20°	813	817	825
25°	810	819	827
30°	803	816	830
35°	795	814	833
40°	786	813	844
45°	773	813	863
50°	756	818	889
55°	737	832	928
60°	706	848	980
65°	661	878	1040
70°	601	919	1119
75°	509	969	1169
80°	402	976	945
85°	296	741	831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.8	3.0
10°-20°	166.3	8.6
20°-30°	254.3	13.1
30°-40°	310.9	16.0
40°-50°	331.3	17.1
50°-60°	316.8	16.4
60°-70°	268.4	13.9
70°-80°	180.4	9.3
80°-90°	50.9	2.6
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°	478.4	24.7
0°-40°	789.3	40.7
0°-60°	1437.4	74.2
0°-90°	1937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	609	608	605	608	608	58
15°	588	588	587	592	591	166
25°	546	548	552	556	557	252
35°	484	488	496	505	507	303
45°	406	413	428	446	454	313
55°	314	326	354	382	396	280
65°	208	229	276	312	327	206
75°	98	134	186	218	225	105
85°	19	39	48	52	54	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	609.1	609.1	609.1	609.1	609.1
2.5°	610.1	610.1	607.2	609.1	609.1
5°	609.1	608.2	605.3	608.2	608.2
7.5°	606.2	605.3	603.4	606.2	605.3
10°	600.5	600.5	598.6	601.4	601.4
12.5°	595.7	594.7	593.8	597.6	596.6
15°	588.0	588.0	587.0	591.8	590.9
17.5°	578.4	579.3	580.3	584.2	585.1
20°	567.8	569.7	570.7	576.5	576.5
22.5°	558.2	559.2	561.1	566.9	566.9
25°	545.7	547.6	551.5	556.3	557.2
27.5°	533.2	534.2	539.0	545.7	546.7
30°	516.9	519.8	525.5	533.2	534.2
32.5°	502.5	505.4	512.1	519.8	521.7
35°	484.2	488.1	495.8	505.4	507.3
37.5°	467.9	470.8	480.4	491.0	493.8
40°	447.7	453.5	463.1	475.6	480.4
42.5°	427.5	433.3	444.8	461.2	466.9
45°	406.4	413.1	427.5	445.8	453.5
47.5°	385.3	393.0	409.3	430.4	439.1
50°	361.3	370.9	391.0	415.1	424.7
52.5°	338.2	349.7	371.8	398.7	411.2
55°	314.2	325.7	354.5	382.4	395.8
57.5°	287.3	302.6	334.3	366.1	380.5
60°	262.3	276.7	315.1	349.7	364.1
62.5°	235.4	254.6	295.9	332.4	346.8
65°	207.5	228.7	275.7	312.3	326.7
67.5°	182.5	205.6	255.6	292.1	306.5
70°	152.8	181.6	233.5	270.0	284.4
72.5°	124.9	156.6	210.4	246.0	259.4
75°	98.0	133.5	186.4	218.1	224.8
77.5°	73.0	110.5	161.4	174.9	170.1
80°	51.9	88.4	125.9	119.1	122.0
82.5°	33.6	67.3	77.8	88.4	91.3
85°	19.2	39.4	48.0	51.9	53.8
87.5°	8.6	14.4	19.2	19.2	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)