

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: P309866

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-5500K**

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: P309866
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 5500K 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: 1939.0 lumens
Efficiency: N/A
Efficacy: 80.5 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

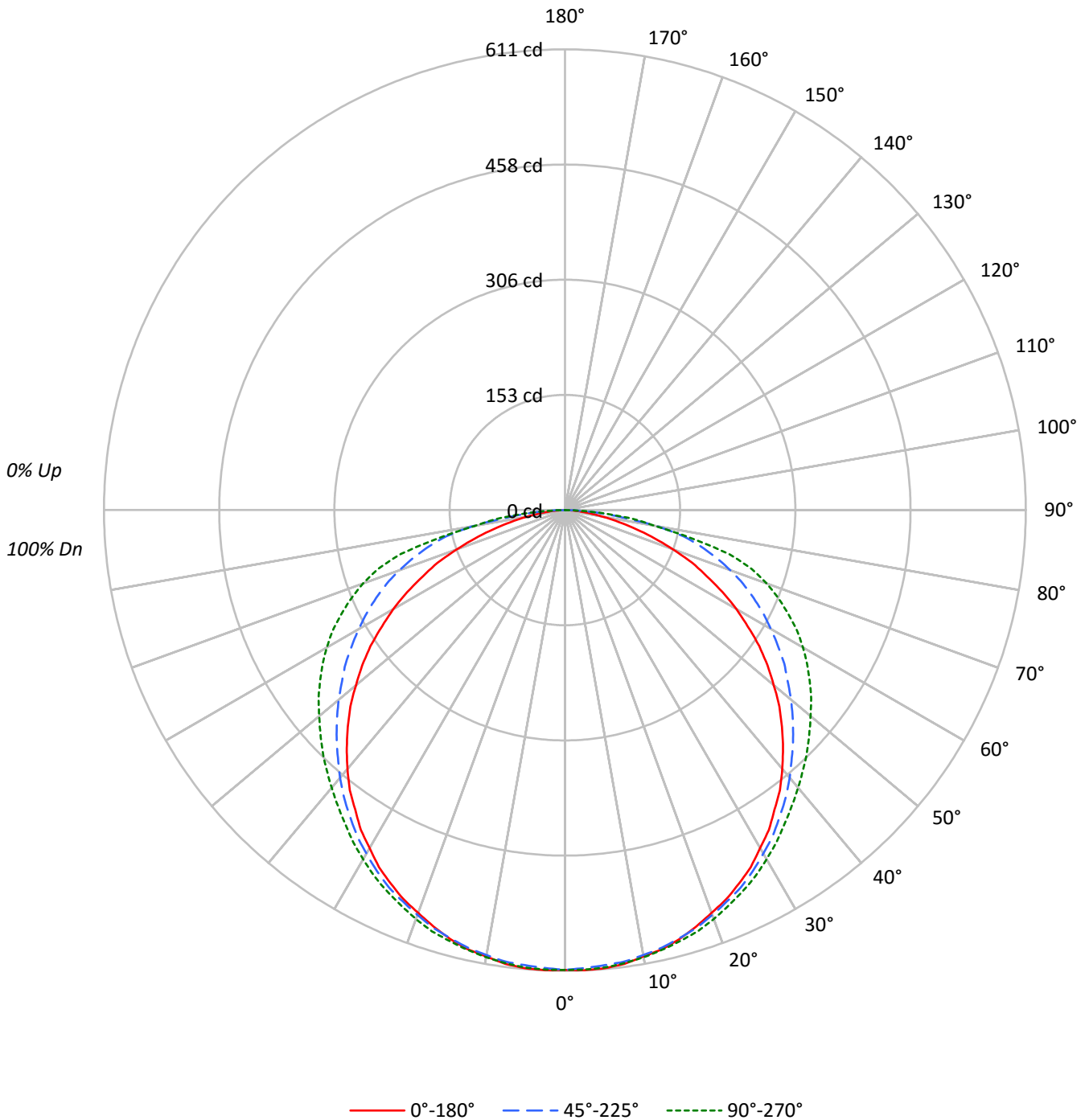
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	824	818	822
10°	821	819	823
15°	820	818	824
20°	814	818	826
25°	811	820	828
30°	804	817	831
35°	796	815	834
40°	787	814	845
45°	774	814	864
50°	757	819	890
55°	738	833	929
60°	707	849	981
65°	661	879	1041
70°	602	919	1120
75°	510	970	1170
80°	402	976	946
85°	296	743	832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.8	3.0
10°-20°	166.5	8.6
20°-30°	254.6	13.1
30°-40°	311.2	16.0
40°-50°	331.7	17.1
50°-60°	317.1	16.4
60°-70°	268.6	13.9
70°-80°	180.6	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°	478.9	24.7
0°-40°	790.1	40.7
0°-60°	1438.9	74.2
0°-90°	1939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	610	610	610	610	610	
5°	610	609	606	609	609	58
15°	589	589	588	592	592	166
25°	546	548	552	557	558	252
35°	485	489	496	506	508	304
45°	407	414	428	446	454	314
55°	314	326	355	383	396	280
65°	208	229	276	313	327	206
75°	98	134	187	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°	609.8	609.8	609.8	609.8	609.8
2.5°	610.7	610.7	607.8	609.8	609.8
5°	609.8	608.8	605.9	608.8	608.8
7.5°	606.9	605.9	604.0	606.9	605.9
10°	601.1	601.1	599.2	602.1	602.1
12.5°	596.3	595.3	594.4	598.2	597.3
15°	588.6	588.6	587.6	592.4	591.5
17.5°	579.0	579.9	580.9	584.8	585.7
20°	568.4	570.3	571.3	577.1	577.1
22.5°	558.8	559.7	561.7	567.4	567.4
25°	546.3	548.2	552.1	556.9	557.8
27.5°	533.8	534.7	539.6	546.3	547.2
30°	517.4	520.3	526.1	533.8	534.7
32.5°	503.0	505.9	512.6	520.3	522.2
35°	484.7	488.6	496.3	505.9	507.8
37.5°	468.4	471.3	480.9	491.5	494.3
40°	448.2	454.0	463.6	476.1	480.9
42.5°	428.0	433.8	445.3	461.6	467.4
45°	406.8	413.6	428.0	446.3	454.0
47.5°	385.7	393.4	409.7	430.9	439.5
50°	361.6	371.2	391.4	415.5	425.1
52.5°	338.5	350.1	372.2	399.1	411.6
55°	314.5	326.0	354.9	382.8	396.2
57.5°	287.6	303.0	334.7	366.4	380.9
60°	262.6	277.0	315.5	350.1	364.5
62.5°	235.6	254.9	296.2	332.8	347.2
65°	207.7	228.9	276.0	312.6	327.0
67.5°	182.7	205.8	255.8	292.4	306.8
70°	152.9	181.8	233.7	270.3	284.7
72.5°	125.0	156.8	210.6	246.2	259.7
75°	98.1	133.7	186.6	218.3	225.1
77.5°	73.1	110.6	161.6	175.0	170.2
80°	51.9	88.5	126.0	119.3	122.1
82.5°	33.7	67.3	77.9	88.5	91.4
85°	19.2	39.4	48.1	51.9	53.9
87.5°	8.7	14.4	19.2	19.2	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)