

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: P309867

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA08-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: P309867
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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: 1944.0 lumens
Efficiency: N/A
Efficacy: 80.7 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

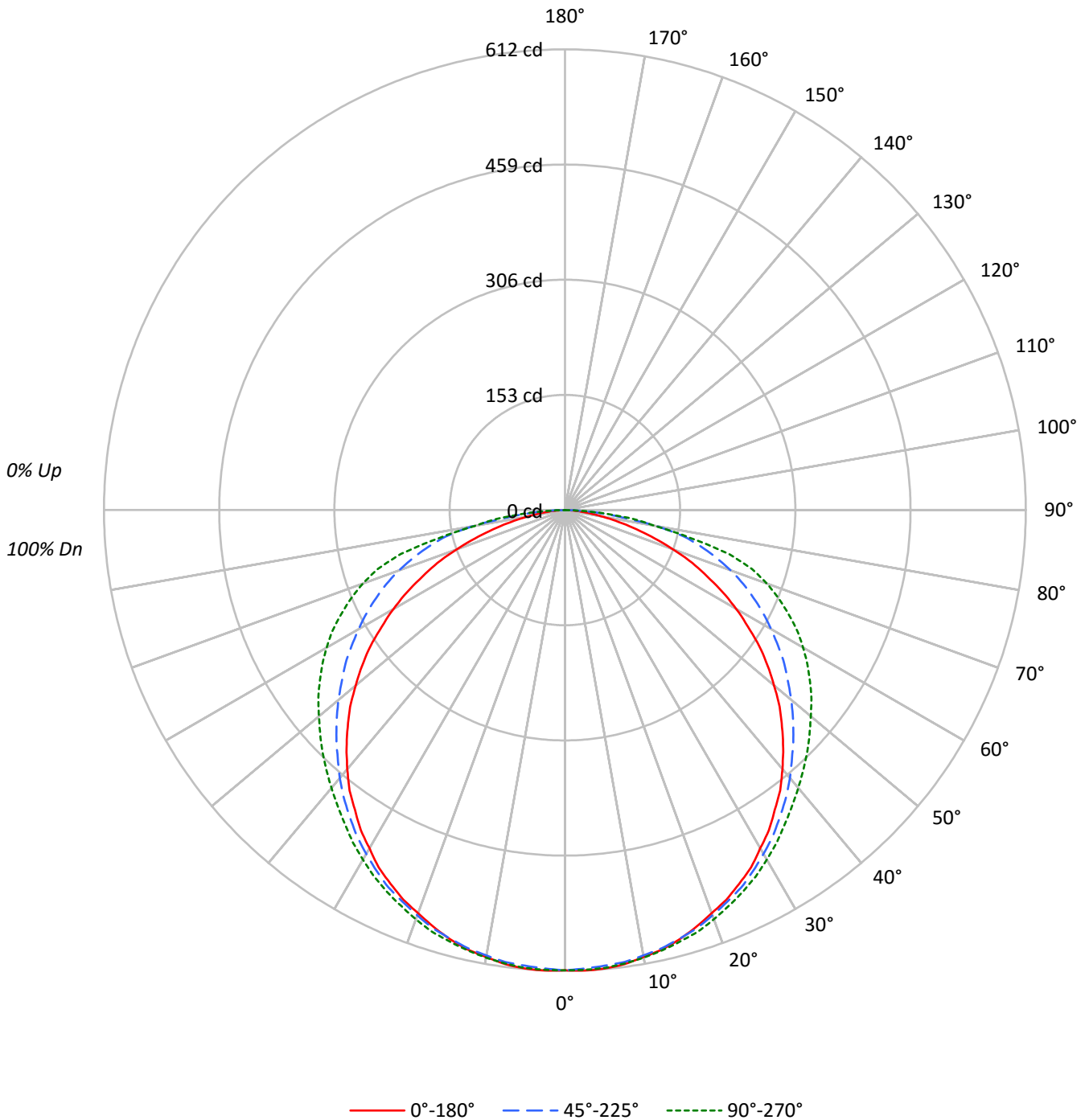
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	822	822	822
5°	826	821	824
10°	823	821	825
15°	822	821	826
20°	816	820	828
25°	813	822	830
30°	806	819	833
35°	798	817	836
40°	789	816	847
45°	776	816	866
50°	759	821	892
55°	740	835	932
60°	708	851	983
65°	663	881	1044
70°	603	922	1123
75°	512	973	1173
80°	404	979	949
85°	298	744	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.0	3.0
10°-20°	166.9	8.6
20°-30°	255.2	13.1
30°-40°	312.0	16.0
40°-50°	332.5	17.1
50°-60°	318.0	16.4
60°-70°	269.3	13.9
70°-80°	181.0	9.3
80°-90°	51.1	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°	480.1	24.7
0°-40°	792.1	40.7
0°-60°	1442.6	74.2
0°-90°	1944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	611	611	611	611	611	
5°	611	610	608	610	610	58
15°	590	590	589	594	593	166
25°	548	550	554	558	559	252
35°	486	490	498	507	509	304
45°	408	415	429	447	455	315
55°	315	327	356	384	397	281
65°	208	230	277	313	328	207
75°	98	134	187	219	226	105
85°	19	40	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°	611.3	611.3	611.3	611.3	611.3
2.5°	612.3	612.3	609.4	611.3	611.3
5°	611.3	610.4	607.5	610.4	610.4
7.5°	608.4	607.5	605.5	608.4	607.5
10°	602.7	602.7	600.7	603.6	603.6
12.5°	597.8	596.9	595.9	599.8	598.8
15°	590.1	590.1	589.2	594.0	593.0
17.5°	580.5	581.4	582.4	586.3	587.2
20°	569.9	571.8	572.8	578.5	578.5
22.5°	560.2	561.2	563.1	568.9	568.9
25°	547.7	549.6	553.5	558.3	559.3
27.5°	535.2	536.1	540.9	547.7	548.7
30°	518.8	521.7	527.4	535.2	536.1
32.5°	504.3	507.2	513.9	521.7	523.6
35°	486.0	489.8	497.6	507.2	509.1
37.5°	469.6	472.5	482.1	492.7	495.6
40°	449.3	455.1	464.8	477.3	482.1
42.5°	429.1	434.9	446.4	462.8	468.6
45°	407.9	414.6	429.1	447.4	455.1
47.5°	386.7	394.4	410.8	432.0	440.7
50°	362.6	372.2	392.4	416.6	426.2
52.5°	339.4	351.0	373.2	400.2	412.7
55°	315.3	326.9	355.8	383.8	397.3
57.5°	288.3	303.7	335.6	367.4	381.8
60°	263.2	277.7	316.3	351.0	365.4
62.5°	236.2	255.5	297.0	333.6	348.1
65°	208.3	229.5	276.7	313.4	327.8
67.5°	183.2	206.3	256.5	293.1	307.6
70°	153.3	182.2	234.3	271.0	285.4
72.5°	125.4	157.2	211.2	246.8	260.3
75°	98.4	134.0	187.1	218.9	225.6
77.5°	73.3	110.9	162.0	175.5	170.7
80°	52.1	88.7	126.3	119.6	122.5
82.5°	33.7	67.5	78.1	88.7	91.6
85°	19.3	39.5	48.2	52.1	54.0
87.5°	8.7	14.5	19.3	19.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)