

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: P312361

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-CP250-W2A-U-3500K**

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: P312361
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-S-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 2627.0 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

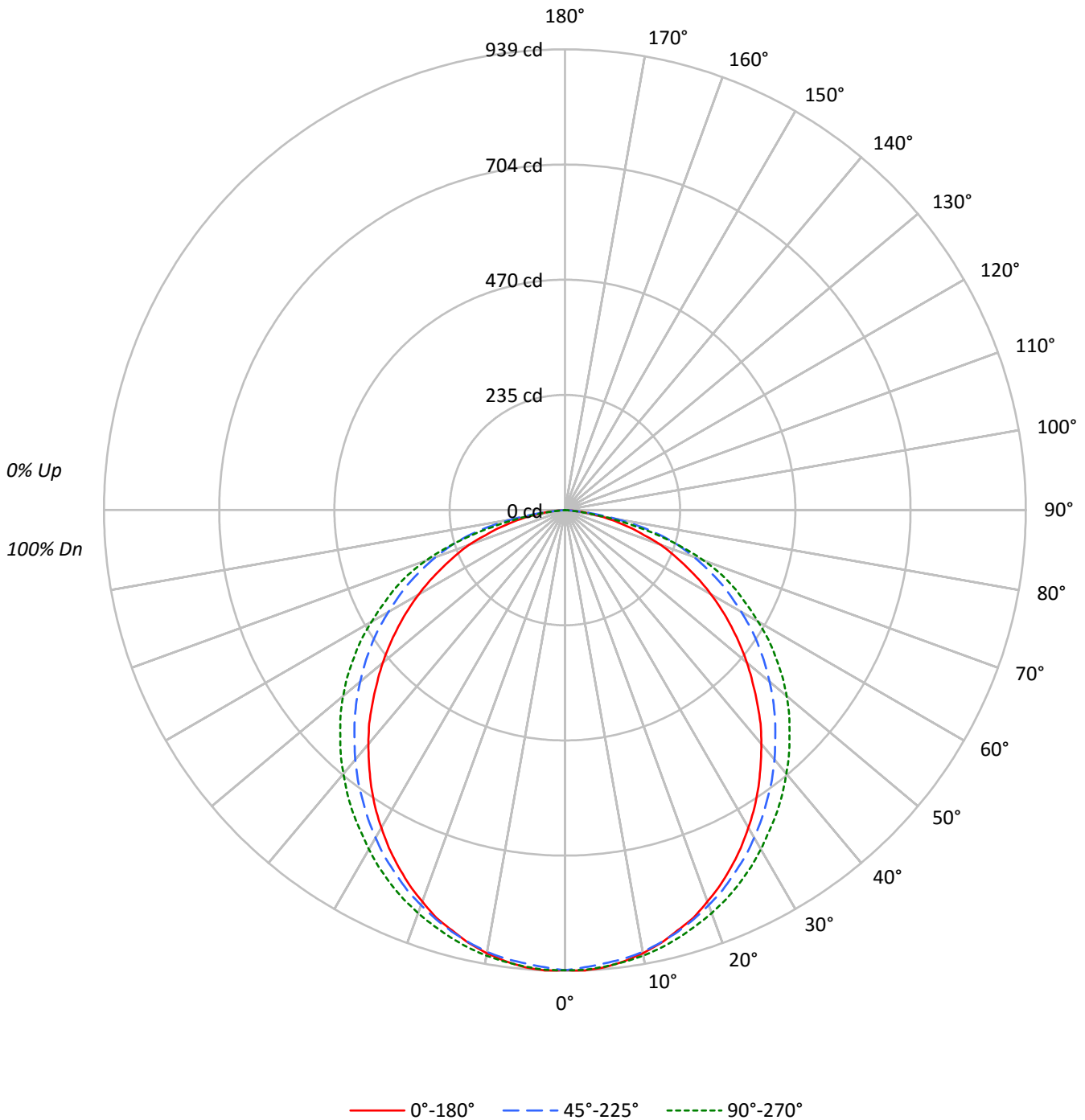
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2524	2524	2524
5°	2526	2505	2523
10°	2506	2499	2520
15°	2471	2478	2511
20°	2432	2454	2503
25°	2382	2425	2494
30°	2323	2396	2481
35°	2259	2362	2473
40°	2187	2334	2466
45°	2107	2305	2463
50°	2028	2279	2470
55°	1943	2261	2463
60°	1851	2229	2447
65°	1741	2223	2446
70°	1640	2203	2378
75°	1422	2153	2032
80°	1150	1736	1353
85°	763	602	401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.6	3.4
10°-20°	252.0	9.6
20°-30°	378.0	14.4
30°-40°	450.9	17.2
40°-50°	466.2	17.7
50°-60°	425.6	16.2
60°-70°	334.9	12.7
70°-80°	195.0	7.4
80°-90°	35.9	1.4
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°	718.5	27.4
0°-40°	1169.4	44.5
0°-60°	2061.2	78.5
0°-90°	2627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	938	938	938	938	938	
5°	935	933	927	935	934	89
15°	887	888	890	901	901	250
25°	802	806	817	836	840	369
35°	688	697	719	746	753	430
45°	554	572	606	640	647	427
55°	414	436	482	517	525	370
65°	274	302	349	376	384	272
75°	137	169	207	203	195	145
85°	25	35	20	16	13	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	937.8	937.8	937.8	937.8	937.8
2.5°	939.1	936.5	932.6	939.1	937.8
5°	935.2	932.6	927.4	935.2	933.9
7.5°	927.4	924.8	922.2	930.0	928.7
10°	917.0	915.7	914.4	923.5	922.2
12.5°	903.9	903.9	902.6	913.0	913.0
15°	887.0	888.3	889.6	901.3	901.3
17.5°	871.4	870.1	874.0	887.0	888.3
20°	849.2	851.8	857.0	872.7	874.0
22.5°	827.1	829.7	838.8	854.4	858.3
25°	802.3	806.2	816.7	836.2	840.1
27.5°	776.3	781.5	795.8	816.7	820.6
30°	747.6	755.4	771.1	794.5	798.4
32.5°	719.0	726.8	746.3	769.8	775.0
35°	687.7	696.8	719.0	746.3	752.8
37.5°	655.2	666.9	692.9	720.3	728.1
40°	622.6	635.6	664.3	692.9	702.0
42.5°	590.0	603.1	634.3	666.9	676.0
45°	553.6	571.8	605.7	639.5	647.3
47.5°	518.4	537.9	575.7	609.6	620.0
50°	484.5	504.1	544.4	579.6	590.0
52.5°	449.4	470.2	513.2	549.7	558.8
55°	414.2	436.3	481.9	517.1	524.9
57.5°	379.0	402.5	449.4	483.2	492.3
60°	343.9	368.6	414.2	448.1	454.6
62.5°	308.7	334.7	381.6	411.6	418.1
65°	273.5	302.2	349.1	376.4	384.2
67.5°	239.7	268.3	313.9	340.0	346.5
70°	208.4	234.4	280.0	299.6	302.2
72.5°	169.3	201.9	246.2	256.6	250.1
75°	136.8	169.3	207.1	203.2	195.4
77.5°	104.2	136.8	161.5	148.5	138.1
80°	74.2	106.8	112.0	92.5	87.3
82.5°	48.2	74.2	62.5	48.2	39.1
85°	24.7	35.2	19.5	15.6	13.0
87.5°	7.8	5.2	2.6	2.6	1.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)