

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: P308767

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CP187-W2A-U-5000K**

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: P308767
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L82765-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 2982.0 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

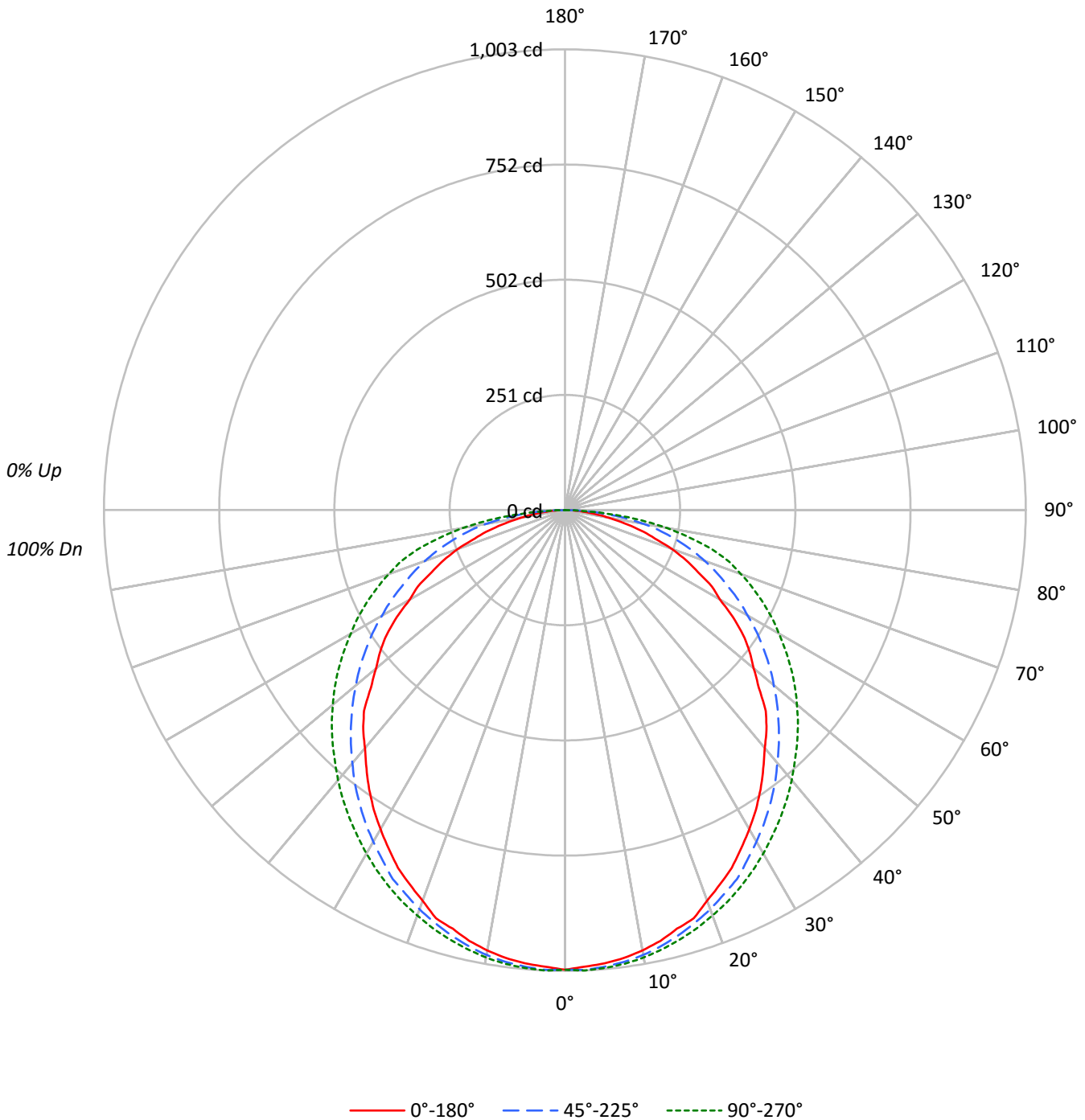
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2692	2692	2692
5°	2676	2695	2703
10°	2660	2687	2703
15°	2628	2668	2696
20°	2591	2648	2689
25°	2551	2632	2687
30°	2492	2590	2683
35°	2438	2560	2687
40°	2376	2527	2697
45°	2352	2504	2721
50°	2246	2485	2761
55°	2223	2478	2819
60°	2097	2474	2896
65°	2036	2490	3026
70°	1954	2549	3212
75°	1781	2626	3457
80°	1526	2720	3495
85°	1235	2600	2998



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	3.2
10°-20°	270.1	9.1
20°-30°	406.5	13.6
30°-40°	487.8	16.4
40°-50°	509.9	17.1
50°-60°	475.2	15.9
60°-70°	389.7	13.1
70°-80°	262.6	8.8
80°-90°	85.5	2.9
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°	771.2	25.9
0°-40°	1259.0	42.2
0°-60°	2244.1	75.3
0°-90°	2982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	990	993	998	999	1000	94
15°	943	949	958	966	968	267
25°	859	865	886	899	905	395
35°	742	752	779	806	818	464
45°	618	622	658	698	715	472
55°	474	482	528	578	601	420
65°	320	334	391	448	475	318
75°	171	190	253	310	332	180
85°	40	57	84	98	97	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1000.5	1000.5	1000.5	1000.5	1000.5
2.5°	994.8	997.6	1001.9	1003.3	1003.3
5°	990.5	993.4	997.6	999.1	1000.5
7.5°	983.4	986.2	991.9	994.8	996.2
10°	973.4	976.2	983.4	987.6	989.1
12.5°	960.5	963.4	971.9	977.7	979.1
15°	943.4	949.1	957.7	966.2	967.7
17.5°	932.0	930.6	942.0	952.0	954.8
20°	904.9	912.0	924.8	936.3	939.1
22.5°	882.0	887.7	904.9	917.7	923.4
25°	859.2	864.9	886.3	899.2	904.9
27.5°	830.6	839.2	859.2	877.7	884.9
30°	802.1	810.7	833.5	854.9	863.5
32.5°	773.6	783.5	807.8	830.6	840.6
35°	742.2	752.1	779.3	806.4	817.8
37.5°	709.3	722.2	750.7	780.7	793.5
40°	676.5	689.4	719.3	753.6	767.8
42.5°	649.4	655.1	689.4	726.5	740.7
45°	618.0	622.3	658.0	697.9	715.0
47.5°	572.3	588.0	626.6	670.8	687.9
50°	536.6	553.8	593.7	640.8	659.4
52.5°	506.7	518.1	562.3	609.4	630.8
55°	473.8	482.4	528.1	578.0	600.9
57.5°	433.9	449.6	495.2	546.6	569.5
60°	389.6	409.6	459.6	515.2	538.1
62.5°	361.1	372.5	426.7	482.4	508.1
65°	319.7	334.0	391.1	448.1	475.3
67.5°	285.4	299.7	358.2	415.3	442.4
70°	248.3	262.6	324.0	381.1	408.2
72.5°	205.5	225.5	289.7	346.8	375.4
75°	171.3	189.8	252.6	309.7	332.5
77.5°	132.7	157.0	215.5	262.6	279.7
80°	98.5	122.7	175.5	209.8	225.5
82.5°	67.1	91.3	131.3	157.0	165.6
85°	40.0	57.1	84.2	98.5	97.1
87.5°	18.6	24.3	34.3	34.3	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)