

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: P312380

Luminaire Tested: **14FCZ2-35-UNV-L83050-S-CP187-W2A-U-3000K**

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: P312380
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: 14FCZ2-35-UNV-L83050-S-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH 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: 3010.0 lumens
Efficiency: N/A
Efficacy: 102.4 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

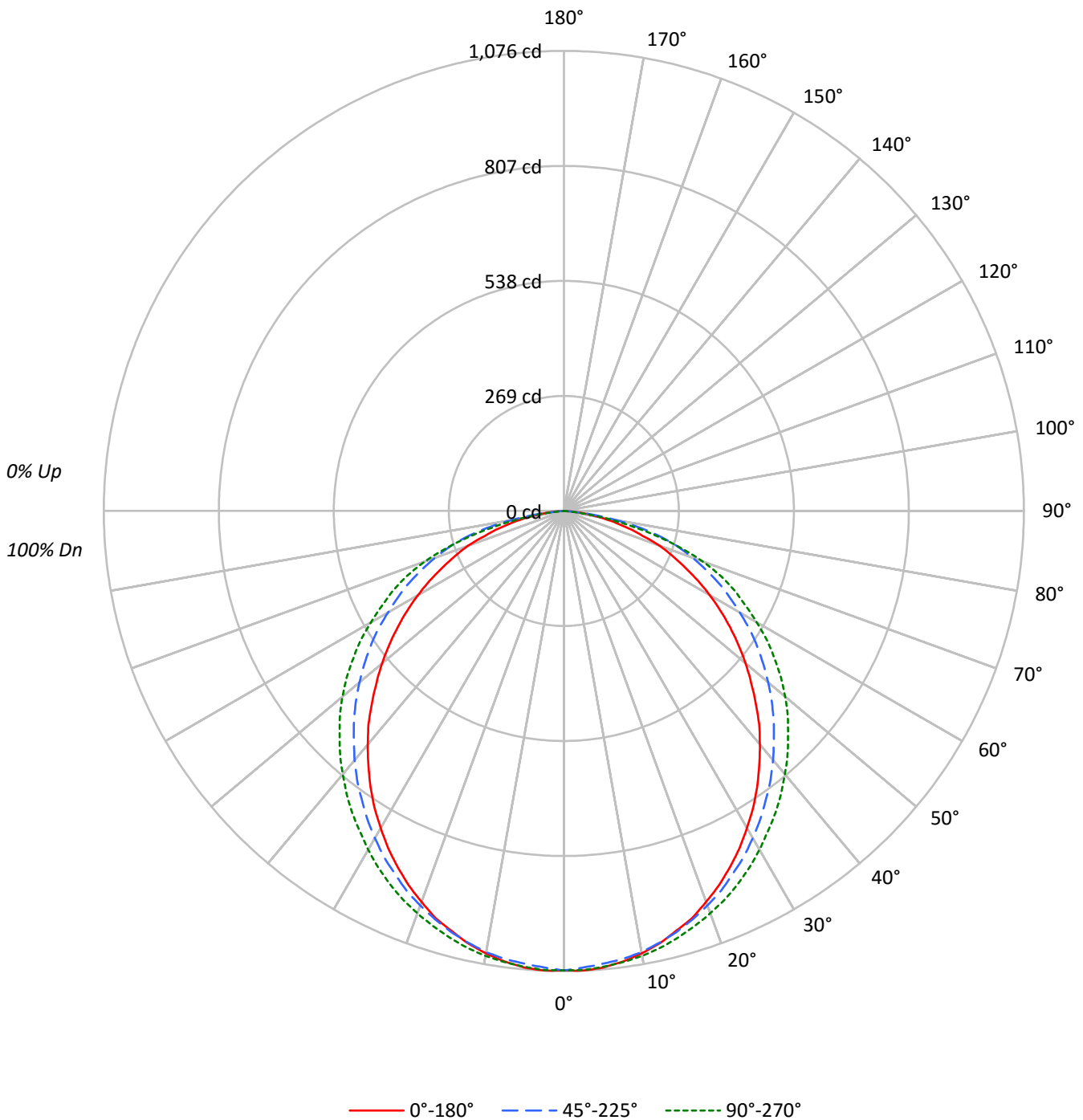
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2891	2891	2891
5°	2894	2870	2890
10°	2871	2863	2887
15°	2831	2840	2877
20°	2786	2812	2868
25°	2730	2778	2858
30°	2662	2745	2843
35°	2589	2706	2834
40°	2506	2674	2826
45°	2414	2641	2823
50°	2324	2611	2830
55°	2227	2591	2822
60°	2120	2554	2803
65°	1996	2547	2804
70°	1879	2525	2724
75°	1629	2467	2328
80°	1319	1988	1550
85°	877	692	460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.5	3.4
10°-20°	288.7	9.6
20°-30°	433.1	14.4
30°-40°	516.7	17.2
40°-50°	534.1	17.7
50°-60°	487.7	16.2
60°-70°	383.8	12.7
70°-80°	223.4	7.4
80°-90°	41.2	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°	823.3	27.4
0°-40°	1339.9	44.5
0°-60°	2361.7	78.5
0°-90°	3010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1074	1074	1074	1074	1074	
5°	1072	1069	1063	1072	1070	102
15°	1016	1018	1019	1033	1033	287
25°	919	924	936	958	963	423
35°	788	798	824	855	863	493
45°	634	655	694	733	742	490
55°	475	500	552	592	601	424
65°	313	346	400	431	440	311
75°	157	194	237	233	224	167
85°	28	40	22	18	15	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1074.5	1074.5	1074.5	1074.5	1074.5
2.5°	1076.0	1073.0	1068.6	1076.0	1074.5
5°	1071.5	1068.6	1062.6	1071.5	1070.0
7.5°	1062.6	1059.6	1056.6	1065.6	1064.1
10°	1050.6	1049.1	1047.7	1058.1	1056.6
12.5°	1035.7	1035.7	1034.2	1046.2	1046.2
15°	1016.3	1017.8	1019.3	1032.7	1032.7
17.5°	998.4	996.9	1001.4	1016.3	1017.8
20°	973.0	976.0	982.0	999.9	1001.4
22.5°	947.7	950.7	961.1	979.0	983.5
25°	919.3	923.8	935.7	958.1	962.6
27.5°	889.5	895.4	911.8	935.7	940.2
30°	856.6	865.6	883.5	910.4	914.8
32.5°	823.8	832.8	855.1	882.0	888.0
35°	788.0	798.4	823.8	855.1	862.6
37.5°	750.7	764.1	794.0	825.3	834.2
40°	713.4	728.3	761.1	794.0	804.4
42.5°	676.1	691.0	726.8	764.1	774.5
45°	634.3	655.2	694.0	732.8	741.7
47.5°	594.0	616.4	659.6	698.4	710.4
50°	555.2	577.6	623.8	664.1	676.1
52.5°	514.9	538.8	588.0	629.8	640.2
55°	474.6	500.0	552.2	592.5	601.4
57.5°	434.3	461.1	514.9	553.7	564.1
60°	394.0	422.3	474.6	513.4	520.8
62.5°	353.7	383.5	437.3	471.6	479.1
65°	313.4	346.2	400.0	431.3	440.3
67.5°	274.6	307.4	359.7	389.5	397.0
70°	238.8	268.6	320.9	343.2	346.2
72.5°	194.0	231.3	282.1	294.0	286.5
75°	156.7	194.0	237.3	232.8	223.9
77.5°	119.4	156.7	185.1	170.1	158.2
80°	85.1	122.4	128.3	106.0	100.0
82.5°	55.2	85.1	71.6	55.2	44.8
85°	28.4	40.3	22.4	17.9	14.9
87.5°	9.0	6.0	3.0	3.0	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)