

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: P311984

Luminaire Tested: **14FCZ2-44-UNV-L83050-HRP-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: P311984
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-44-UNV-L83050-HRP-CP187-W2A-U-5000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 5000K 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: 3127.0 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

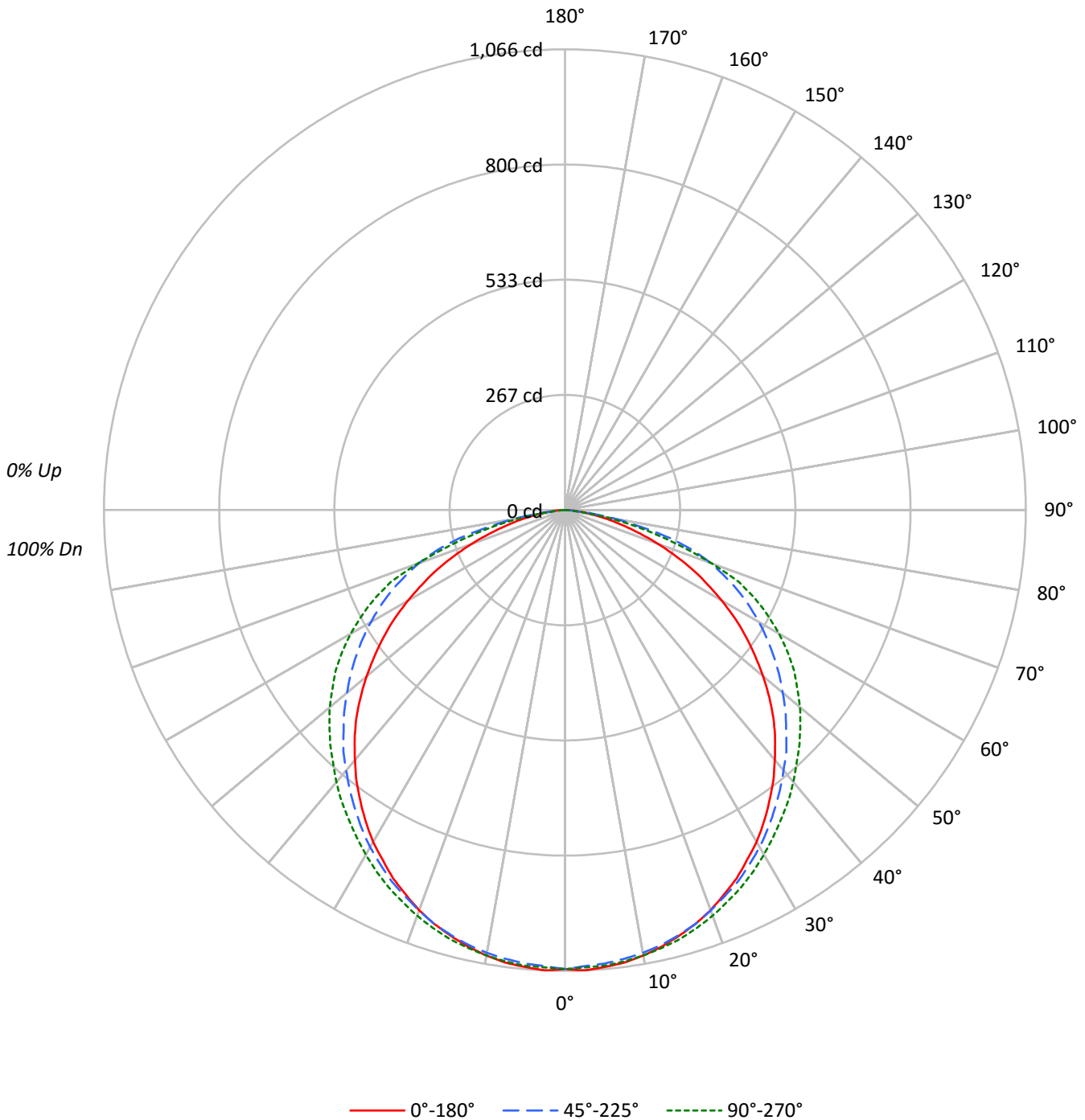
Input Watts (W): 40.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2858	2858	2858
5°	2866	2845	2858
10°	2859	2843	2859
15°	2841	2835	2863
20°	2821	2824	2861
25°	2791	2814	2861
30°	2756	2799	2860
35°	2707	2778	2865
40°	2653	2763	2888
45°	2597	2754	2919
50°	2507	2754	2972
55°	2399	2768	3035
60°	2255	2789	3075
65°	2078	2818	3093
70°	1810	2824	2847
75°	1493	2627	2300
80°	1173	1889	1539
85°	911	729	364



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.5	3.2
10°-20°	288.5	9.2
20°-30°	438.1	14.0
30°-40°	530.8	17.0
40°-50°	559.4	17.9
50°-60°	522.2	16.7
60°-70°	417.3	13.3
70°-80°	229.6	7.3
80°-90°	40.5	1.3
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°	827.1	26.5
0°-40°	1357.9	43.4
0°-60°	2439.5	78.0
0°-90°	3127.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3127.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1061	1058	1053	1060	1058	101
15°	1020	1020	1018	1028	1028	288
25°	940	942	948	962	964	433
35°	824	832	846	867	872	516
45°	682	695	724	756	767	525
55°	511	537	590	631	647	456
65°	326	368	442	479	486	321
75°	144	206	253	227	221	155
85°	30	37	24	15	12	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1061.9	1061.9	1061.9	1061.9	1061.9
2.5°	1065.9	1062.9	1056.0	1061.9	1059.0
5°	1061.0	1058.0	1053.1	1060.0	1058.0
7.5°	1056.0	1052.1	1047.2	1055.1	1053.1
10°	1046.2	1043.3	1040.3	1047.2	1046.2
12.5°	1034.4	1033.4	1030.5	1038.3	1037.4
15°	1019.7	1019.7	1017.7	1027.5	1027.5
17.5°	1003.9	1002.9	1003.9	1014.7	1013.8
20°	985.2	985.2	986.2	999.0	999.0
22.5°	962.6	963.6	966.6	982.3	981.3
25°	940.0	942.0	947.9	961.7	963.6
27.5°	912.5	917.4	924.3	941.0	943.0
30°	886.9	889.9	900.7	916.4	920.4
32.5°	856.4	862.3	874.1	891.8	896.8
35°	824.0	831.9	845.6	867.3	872.2
37.5°	791.5	798.4	817.1	839.7	848.6
40°	755.2	767.0	786.6	812.2	822.0
42.5°	719.8	731.6	758.1	784.7	793.5
45°	682.4	695.2	723.7	756.1	767.0
47.5°	641.1	655.8	692.2	726.6	738.4
50°	598.8	617.5	657.8	696.2	709.9
52.5°	554.6	578.2	624.4	664.7	677.5
55°	511.3	536.9	590.0	631.3	647.0
57.5°	467.1	494.6	554.6	601.8	610.6
60°	418.9	452.3	518.2	559.5	571.3
62.5°	371.7	410.0	480.8	520.2	530.0
65°	326.4	367.7	442.5	478.9	485.7
67.5°	277.3	326.4	400.2	433.6	435.6
70°	230.1	287.1	358.9	374.6	361.8
72.5°	183.9	244.8	310.7	297.9	287.1
75°	143.6	205.5	252.7	227.1	221.2
77.5°	106.2	168.1	180.9	167.2	156.3
80°	75.7	132.7	121.9	104.2	99.3
82.5°	52.1	83.6	66.9	52.1	45.2
85°	29.5	37.4	23.6	14.7	11.8
87.5°	12.8	8.8	4.9	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)