

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: P311987

Luminaire Tested: **14FCZ2-44-UNV-L83050-HRP-CP250-W2A-U-4000K**

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: P311987
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-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 3072.0 lumens
Efficiency: N/A
Efficacy: 78.4 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

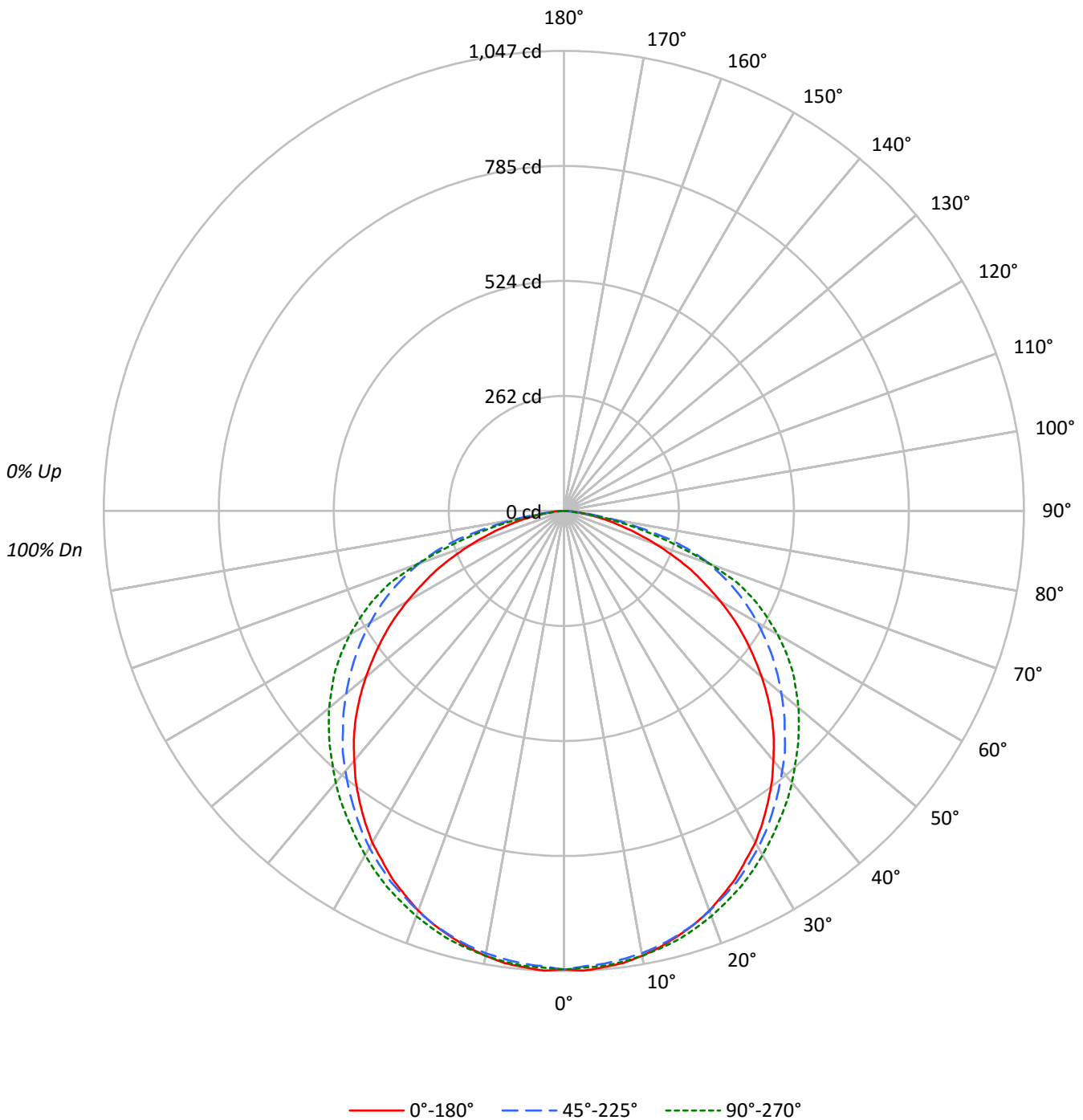
Input Watts (W): 39.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2807	2807	2807
5°	2816	2795	2808
10°	2808	2793	2808
15°	2791	2785	2812
20°	2772	2775	2810
25°	2742	2765	2811
30°	2707	2749	2810
35°	2659	2729	2815
40°	2606	2715	2837
45°	2551	2706	2868
50°	2463	2705	2920
55°	2357	2719	2982
60°	2215	2740	3020
65°	2042	2768	3039
70°	1778	2774	2797
75°	1466	2582	2259
80°	1153	1857	1512
85°	895	716	358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	3.2
10°-20°	283.4	9.2
20°-30°	430.4	14.0
30°-40°	521.5	17.0
40°-50°	549.5	17.9
50°-60°	513.0	16.7
60°-70°	410.0	13.3
70°-80°	225.6	7.3
80°-90°	39.8	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°	812.6	26.5
0°-40°	1334.1	43.4
0°-60°	2396.6	78.0
0°-90°	3072.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3072.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1043	1043	1043	1043	1043	
5°	1042	1039	1035	1041	1039	99
15°	1002	1002	1000	1010	1010	283
25°	924	925	931	945	947	425
35°	810	817	831	852	857	506
45°	670	683	711	743	754	516
55°	502	527	580	620	636	448
65°	321	361	435	470	477	316
75°	141	202	248	223	217	152
85°	29	37	23	14	12	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1043.3	1043.3	1043.3	1043.3	1043.3
2.5°	1047.1	1044.2	1037.5	1043.3	1040.4
5°	1042.3	1039.4	1034.6	1041.3	1039.4
7.5°	1037.5	1033.6	1028.8	1036.5	1034.6
10°	1027.8	1024.9	1022.0	1028.8	1027.8
12.5°	1016.2	1015.3	1012.4	1020.1	1019.1
15°	1001.7	1001.7	999.8	1009.5	1009.5
17.5°	986.3	985.3	986.3	996.9	995.9
20°	967.9	967.9	968.9	981.4	981.4
22.5°	945.7	946.7	949.6	965.0	964.1
25°	923.5	925.4	931.2	944.7	946.7
27.5°	896.4	901.3	908.0	924.5	926.4
30°	871.3	874.2	884.8	900.3	904.2
32.5°	841.4	847.2	858.8	876.2	881.0
35°	809.5	817.2	830.7	852.0	856.8
37.5°	777.6	784.4	802.7	825.0	833.6
40°	741.9	753.5	772.8	797.9	807.6
42.5°	707.1	718.7	744.8	770.9	779.6
45°	670.4	683.0	711.0	742.8	753.5
47.5°	629.8	644.3	680.1	713.9	725.5
50°	588.3	606.6	646.2	683.9	697.4
52.5°	544.8	568.0	613.4	653.0	665.6
55°	502.3	527.4	579.6	620.2	635.6
57.5°	458.8	485.9	544.8	591.2	599.9
60°	411.5	444.4	509.1	549.6	561.2
62.5°	365.1	402.8	472.4	511.0	520.7
65°	320.7	361.3	434.7	470.4	477.2
67.5°	272.4	320.7	393.2	426.0	427.9
70°	226.0	282.1	352.6	368.0	355.5
72.5°	180.6	240.5	305.3	292.7	282.1
75°	141.0	201.9	248.3	223.1	217.3
77.5°	104.3	165.2	177.7	164.2	153.6
80°	74.4	130.4	119.8	102.4	97.6
82.5°	51.2	82.1	65.7	51.2	44.4
85°	29.0	36.7	23.2	14.5	11.6
87.5°	12.6	8.7	4.8	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)