

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: P311967

Luminaire Tested: **14FCZ2-44-UNV-L83050-HRP-CA08-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: P311967
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-CA08-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 3310.0 lumens
Efficiency: N/A
Efficacy: 84.4 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

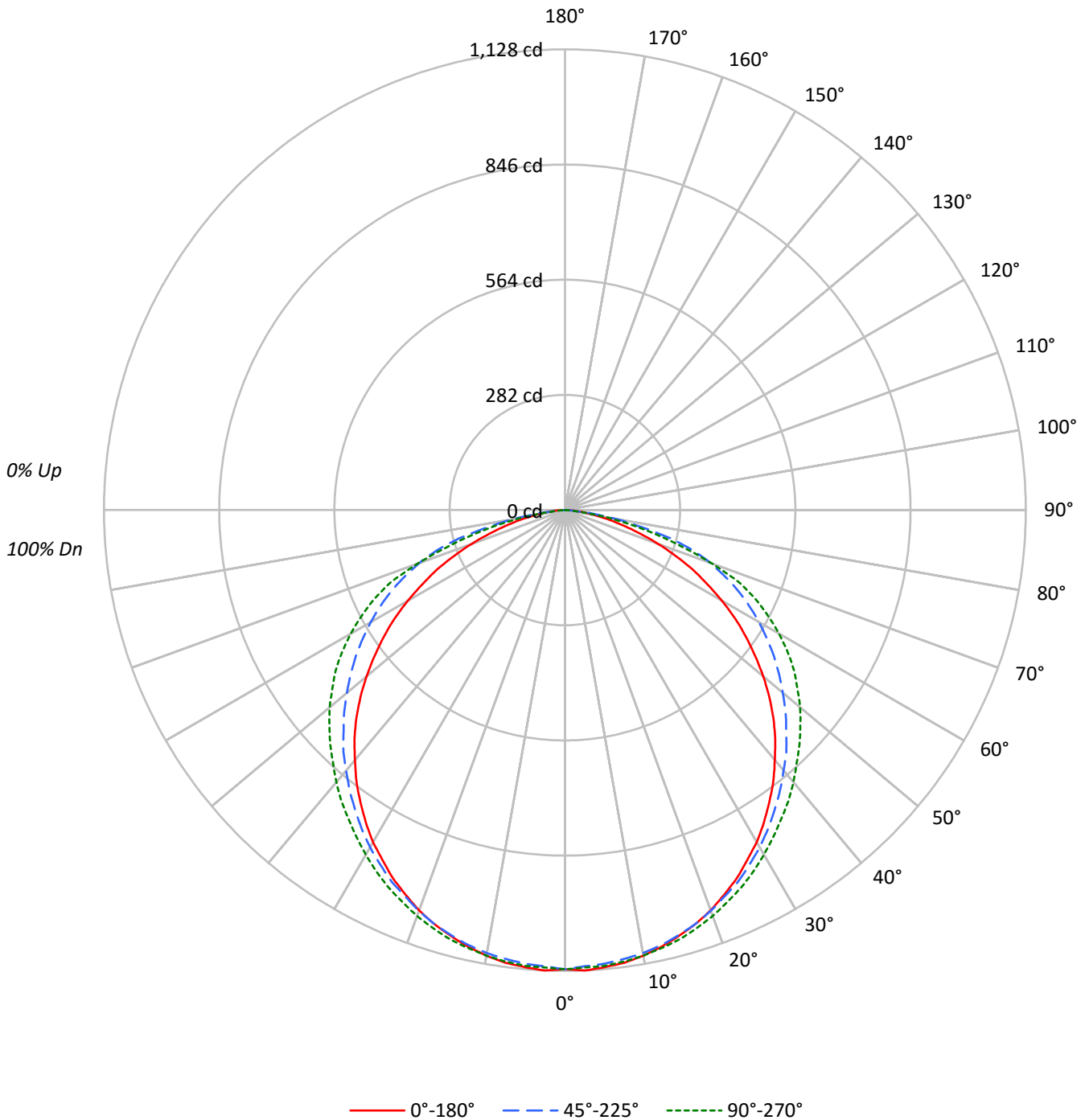
Input Watts (W): 39.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3025	3025	3025
5°	3034	3011	3025
10°	3026	3009	3026
15°	3007	3001	3030
20°	2987	2989	3028
25°	2954	2979	3029
30°	2917	2962	3027
35°	2865	2940	3033
40°	2808	2925	3057
45°	2749	2915	3089
50°	2654	2915	3146
55°	2539	2930	3213
60°	2386	2952	3254
65°	2201	2982	3274
70°	1917	2989	3013
75°	1580	2781	2435
80°	1241	2001	1629
85°	963	772	386



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	3.2
10°-20°	305.4	9.2
20°-30°	463.7	14.0
30°-40°	561.9	17.0
40°-50°	592.1	17.9
50°-60°	552.8	16.7
60°-70°	441.7	13.3
70°-80°	243.1	7.3
80°-90°	42.9	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°	875.5	26.5
0°-40°	1437.4	43.4
0°-60°	2582.3	78.0
0°-90°	3310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1124	1124	1124	1124	1124	
5°	1123	1120	1115	1122	1120	107
15°	1079	1079	1077	1088	1088	305
25°	995	997	1003	1018	1020	458
35°	872	880	895	918	923	546
45°	722	736	766	800	812	556
55°	541	568	624	668	685	483
65°	346	389	468	507	514	340
75°	152	218	268	240	234	164
85°	31	40	25	16	12	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1124.1	1124.1	1124.1	1124.1	1124.1
2.5°	1128.3	1125.1	1117.8	1124.1	1121.0
5°	1123.1	1119.9	1114.7	1122.0	1119.9
7.5°	1117.8	1113.7	1108.5	1116.8	1114.7
10°	1107.4	1104.3	1101.2	1108.5	1107.4
12.5°	1094.9	1093.9	1090.8	1099.1	1098.1
15°	1079.3	1079.3	1077.3	1087.7	1087.7
17.5°	1062.7	1061.6	1062.7	1074.1	1073.1
20°	1042.9	1042.9	1043.9	1057.5	1057.5
22.5°	1019.0	1020.0	1023.1	1039.8	1038.7
25°	995.0	997.1	1003.4	1017.9	1020.0
27.5°	965.9	971.1	978.4	996.1	998.2
30°	938.8	941.9	953.4	970.1	974.2
32.5°	906.6	912.8	925.3	944.0	949.2
35°	872.2	880.5	895.1	918.0	923.2
37.5°	837.9	845.2	864.9	888.9	898.2
40°	799.4	811.8	832.7	859.7	870.1
42.5°	761.9	774.4	802.5	830.6	839.9
45°	722.3	735.9	766.0	800.4	811.8
47.5°	678.6	694.2	732.7	769.2	781.7
50°	633.9	653.6	696.3	736.9	751.5
52.5°	587.0	612.0	660.9	703.6	717.1
55°	541.2	568.3	624.5	668.2	684.9
57.5°	494.4	523.5	587.0	637.0	646.4
60°	443.4	478.8	548.5	592.2	604.7
62.5°	393.4	434.0	509.0	550.6	561.0
65°	345.6	389.3	468.4	506.9	514.2
67.5°	293.5	345.6	423.6	459.0	461.1
70°	243.6	303.9	379.9	396.6	383.0
72.5°	194.6	259.2	328.9	315.4	303.9
75°	152.0	217.5	267.5	240.4	234.2
77.5°	112.4	178.0	191.5	176.9	165.5
80°	80.1	140.5	129.1	110.3	105.1
82.5°	55.2	88.5	70.8	55.2	47.9
85°	31.2	39.6	25.0	15.6	12.5
87.5°	13.5	9.4	5.2	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)