

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: P311942

Luminaire Tested: **14FCZ2-39-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: P311942
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: 14FCZ2-39-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: 2961.0 lumens
Efficiency: N/A
Efficacy: 86.8 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

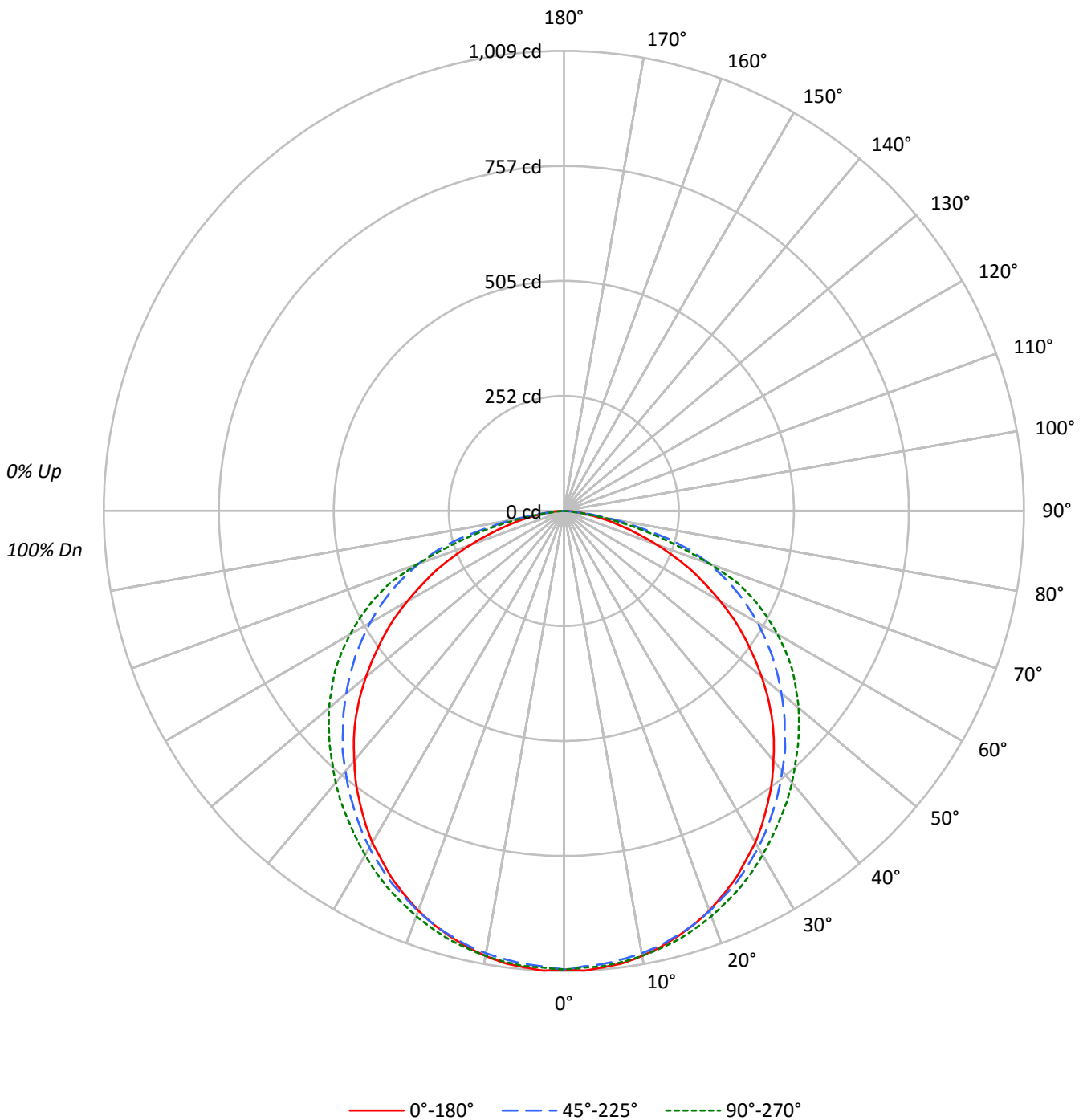
Input Watts (W): 34.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2706	2706	2706
5°	2714	2694	2706
10°	2707	2692	2707
15°	2690	2685	2711
20°	2672	2674	2709
25°	2643	2665	2709
30°	2609	2650	2708
35°	2563	2630	2713
40°	2512	2617	2734
45°	2459	2608	2764
50°	2374	2608	2814
55°	2272	2621	2875
60°	2134	2641	2912
65°	1968	2668	2929
70°	1714	2674	2696
75°	1413	2488	2178
80°	1111	1790	1457
85°	861	689	346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	3.2
10°-20°	273.2	9.2
20°-30°	414.8	14.0
30°-40°	502.6	17.0
40°-50°	529.7	17.9
50°-60°	494.5	16.7
60°-70°	395.2	13.3
70°-80°	217.4	7.3
80°-90°	38.4	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°	783.2	26.5
0°-40°	1285.8	43.4
0°-60°	2310.0	78.0
0°-90°	2961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2961.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1005	1002	997	1004	1002	95
15°	966	966	964	973	973	273
25°	890	892	898	911	912	410
35°	780	788	801	821	826	488
45°	646	658	685	716	726	497
55°	484	508	559	598	613	432
65°	309	348	419	453	460	304
75°	136	195	239	215	210	146
85°	28	35	22	14	11	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1005.6	1005.6	1005.6	1005.6	1005.6
2.5°	1009.3	1006.5	1000.0	1005.6	1002.8
5°	1004.6	1001.8	997.2	1003.7	1001.8
7.5°	1000.0	996.3	991.6	999.1	997.2
10°	990.7	987.9	985.1	991.6	990.7
12.5°	979.5	978.6	975.8	983.2	982.3
15°	965.5	965.5	963.7	973.0	973.0
17.5°	950.6	949.7	950.6	960.9	959.9
20°	932.9	932.9	933.9	946.0	946.0
22.5°	911.5	912.5	915.3	930.2	929.2
25°	890.1	892.0	897.6	910.6	912.5
27.5°	864.0	868.7	875.2	891.0	892.9
30°	839.8	842.6	852.9	867.8	871.5
32.5°	811.0	816.6	827.7	844.5	849.1
35°	780.2	787.7	800.7	821.2	825.9
37.5°	749.5	756.0	773.7	795.1	803.5
40°	715.1	726.2	744.9	769.1	778.4
42.5°	681.6	692.7	717.9	743.0	751.4
45°	646.2	658.3	685.3	716.0	726.2
47.5°	607.1	621.0	655.5	688.1	699.2
50°	567.0	584.7	622.9	659.2	672.2
52.5°	525.1	547.5	591.2	629.4	641.5
55°	484.2	508.4	558.7	597.8	612.7
57.5°	442.3	468.3	525.1	569.8	578.2
60°	396.6	428.3	490.7	529.8	541.0
62.5°	351.9	388.3	455.3	492.5	501.9
65°	309.1	348.2	419.0	453.4	460.0
67.5°	262.6	309.1	379.0	410.6	412.5
70°	217.9	271.9	339.8	354.7	342.6
72.5°	174.1	231.8	294.2	282.1	271.9
75°	135.9	194.6	239.3	215.1	209.5
77.5°	100.6	159.2	171.3	158.3	148.0
80°	71.7	125.7	115.5	98.7	94.0
82.5°	49.3	79.1	63.3	49.3	42.8
85°	27.9	35.4	22.3	14.0	11.2
87.5°	12.1	8.4	4.7	3.7	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)