

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: P312542

Luminaire Tested: **22FCZ2-39HE-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: P312542
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L83050-HRP-CA08-W2A-U-4000K
Description: 2'X2' 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: 2999.0 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

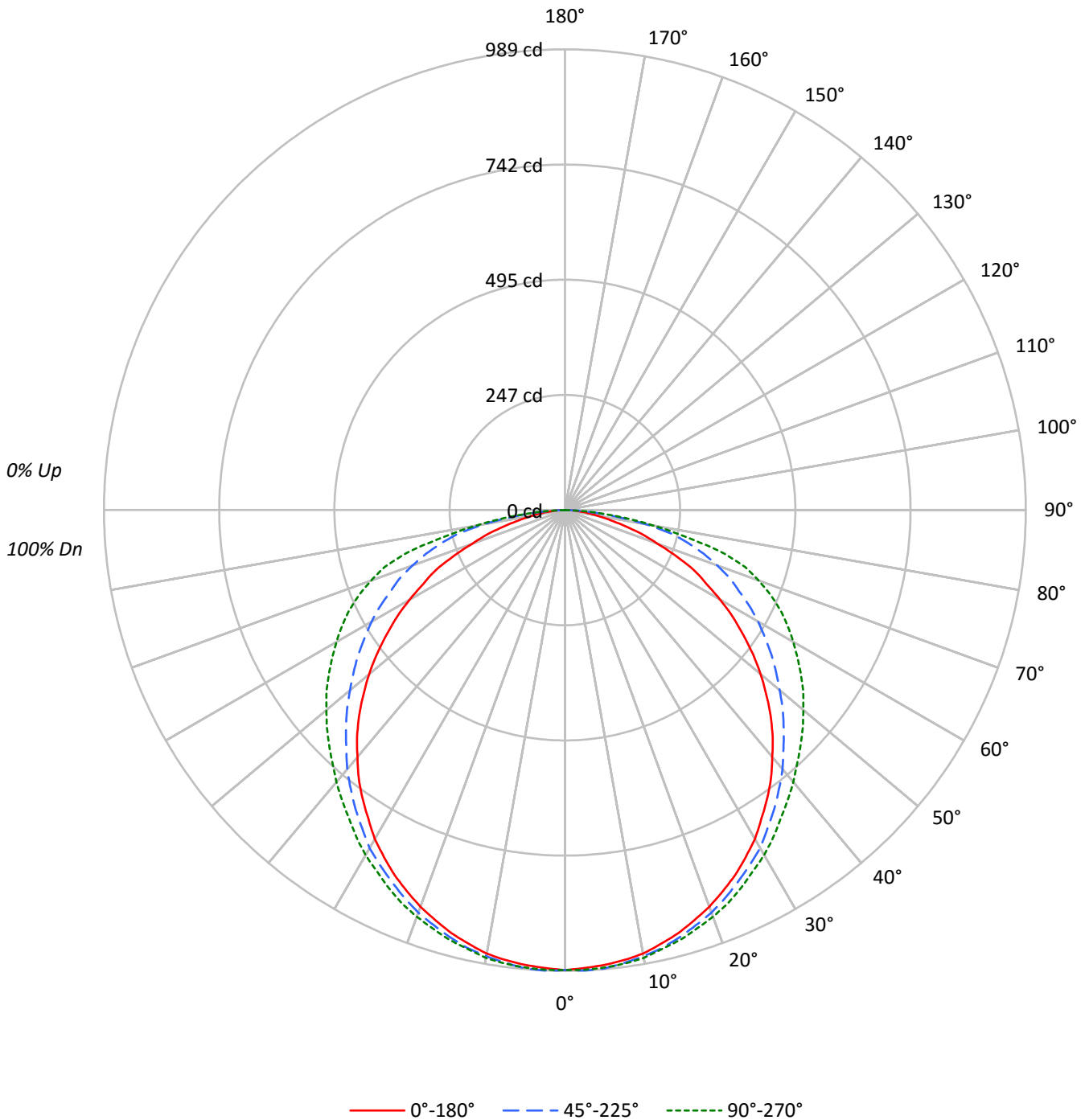
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2657	2657	2657
5°	2647	2667	2662
10°	2641	2657	2667
15°	2619	2646	2662
20°	2595	2633	2660
25°	2567	2612	2657
30°	2534	2604	2657
35°	2486	2573	2654
40°	2432	2552	2678
45°	2376	2527	2721
50°	2297	2519	2796
55°	2192	2539	2902
60°	2067	2576	3045
65°	1952	2626	3252
70°	1667	2739	3483
75°	1396	2852	3619
80°	1144	2755	3020
85°	994	2044	2220



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.6	3.1
10°-20°	267.7	8.9
20°-30°	405.7	13.5
30°-40°	489.9	16.3
40°-50°	514.8	17.2
50°-60°	484.4	16.2
60°-70°	403.9	13.5
70°-80°	267.6	8.9
80°-90°	71.3	2.4
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°	767.1	25.6
0°-40°	1257.0	41.9
0°-60°	2256.2	75.2
0°-90°	2999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	988	988	988	988	988	
5°	980	982	988	988	986	93
15°	940	944	950	954	955	265
25°	865	870	880	891	895	398
35°	757	764	783	800	808	473
45°	624	634	664	698	715	481
55°	467	488	541	596	619	418
65°	306	333	412	480	511	298
75°	134	187	274	331	348	146
85°	32	49	66	72	72	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	987.5	987.5	987.5	987.5	987.5
2.5°	983.8	985.6	989.4	989.4	987.5
5°	980.0	981.9	987.5	987.5	985.6
7.5°	974.3	976.2	980.0	983.8	981.9
10°	966.7	968.6	972.4	976.2	976.2
12.5°	953.5	955.4	962.9	964.8	964.8
15°	940.2	944.0	949.7	953.5	955.4
17.5°	923.2	927.0	934.6	942.1	942.1
20°	906.2	910.0	919.4	927.0	928.9
22.5°	885.4	891.1	900.5	910.0	913.8
25°	864.6	870.2	879.7	891.1	894.8
27.5°	840.0	845.6	858.9	872.1	874.0
30°	815.4	821.1	838.1	849.4	855.1
32.5°	785.1	792.7	809.7	826.7	832.4
35°	756.7	764.3	783.2	800.2	807.8
37.5°	726.5	734.0	754.8	775.7	785.1
40°	692.4	701.9	726.5	749.2	762.4
42.5°	660.2	669.7	694.3	724.6	737.8
45°	624.3	633.8	664.0	698.1	715.1
47.5°	586.5	597.8	633.8	675.4	692.4
50°	548.6	561.9	601.6	648.9	667.8
52.5°	508.9	525.9	571.3	622.4	645.1
55°	467.3	488.1	541.1	595.9	618.6
57.5°	427.6	446.5	508.9	567.5	592.1
60°	384.0	408.6	478.6	539.2	565.7
62.5°	342.4	368.9	446.5	510.8	539.2
65°	306.5	333.0	412.4	480.5	510.8
67.5°	259.2	295.1	384.0	448.4	478.6
70°	211.9	261.1	348.1	414.3	442.7
72.5°	175.9	223.2	312.2	378.4	404.9
75°	134.3	187.3	274.3	331.1	348.1
77.5°	100.3	155.1	234.6	263.0	264.9
80°	73.8	119.2	177.8	187.3	194.9
82.5°	51.1	83.2	115.4	126.8	130.5
85°	32.2	49.2	66.2	71.9	71.9
87.5°	17.0	18.9	22.7	22.7	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)