

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: P312860

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CP250-W2A-U-3000K**

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: P312860  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
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-CP250-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 3000K 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**

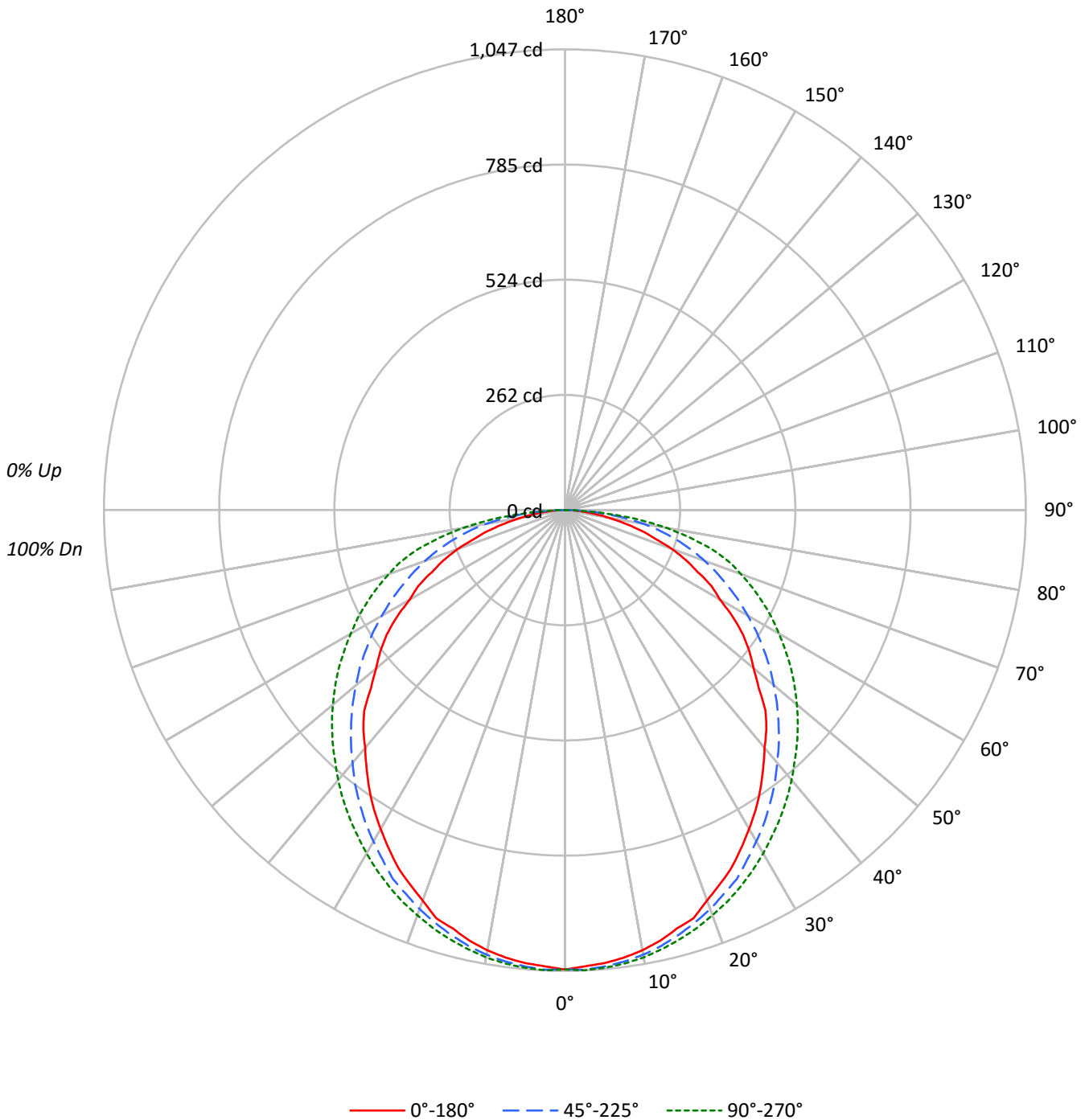
Lumens per Lamp: N/A  
Luminaire Lumens: 3111.0 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2809	2809	2809
5°	2791	2811	2820
10°	2775	2803	2820
15°	2742	2783	2812
20°	2703	2763	2806
25°	2662	2745	2803
30°	2600	2702	2799
35°	2544	2671	2803
40°	2479	2636	2814
45°	2453	2612	2839
50°	2344	2593	2880
55°	2319	2585	2941
60°	2188	2580	3021
65°	2124	2598	3157
70°	2039	2659	3350
75°	1858	2740	3607
80°	1592	2837	3646
85°	1288	2711	3125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.8	3.2
10°-20°	281.8	9.1
20°-30°	424.1	13.6
30°-40°	509.0	16.4
40°-50°	532.0	17.1
50°-60°	495.7	15.9
60°-70°	406.6	13.1
70°-80°	274.0	8.8
80°-90°	89.2	2.9
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°	804.6	25.9
0°-40°	1313.5	42.2
0°-60°	2341.2	75.3
0°-90°	3111.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3111.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1033	1036	1041	1042	1044	98
15°	984	990	999	1008	1010	278
25°	896	902	925	938	944	412
35°	774	785	813	841	853	484
45°	645	649	686	728	746	493
55°	494	503	551	603	627	438
65°	334	348	408	468	496	332
75°	179	198	264	323	347	188
85°	42	60	88	103	101	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1043.8	1043.8	1043.8	1043.8	1043.8
2.5°	1037.8	1040.8	1045.3	1046.7	1046.7
5°	1033.3	1036.3	1040.8	1042.3	1043.8
7.5°	1025.9	1028.9	1034.8	1037.8	1039.3
10°	1015.5	1018.5	1025.9	1030.4	1031.9
12.5°	1002.1	1005.1	1014.0	1019.9	1021.4
15°	984.2	990.2	999.1	1008.0	1009.5
17.5°	972.3	970.8	982.7	993.1	996.1
20°	944.0	951.5	964.9	976.8	979.7
22.5°	920.2	926.1	944.0	957.4	963.4
25°	896.4	902.3	924.6	938.1	944.0
27.5°	866.6	875.5	896.4	915.7	923.2
30°	836.8	845.7	869.6	891.9	900.8
32.5°	807.0	817.4	842.8	866.6	877.0
35°	774.3	784.7	813.0	841.3	853.2
37.5°	740.0	753.4	783.2	814.5	827.9
40°	705.8	719.2	750.4	786.2	801.1
42.5°	677.5	683.4	719.2	757.9	772.8
45°	644.7	649.2	686.4	728.1	746.0
47.5°	597.1	613.5	653.7	699.8	717.7
50°	559.9	577.7	619.4	668.5	687.9
52.5°	528.6	540.5	586.7	635.8	658.1
55°	494.3	503.3	550.9	603.0	626.9
57.5°	452.6	469.0	516.7	570.3	594.1
60°	406.5	427.3	479.4	537.5	561.3
62.5°	376.7	388.6	445.2	503.3	530.1
65°	333.5	348.4	408.0	467.5	495.8
67.5°	297.8	312.7	373.7	433.3	461.6
70°	259.1	274.0	338.0	397.6	425.8
72.5°	214.4	235.3	302.3	361.8	391.6
75°	178.7	198.0	263.5	323.1	346.9
77.5°	138.5	163.8	224.8	274.0	291.8
80°	102.7	128.1	183.1	218.9	235.3
82.5°	70.0	95.3	137.0	163.8	172.7
85°	41.7	59.6	87.8	102.7	101.2
87.5°	19.4	25.3	35.7	35.7	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)