

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: P312952

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-CP125-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: P312952  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-29HE-UNV-L83050-S-CP125-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2777.0 lumens  
Efficiency: N/A  
Efficacy: 121.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

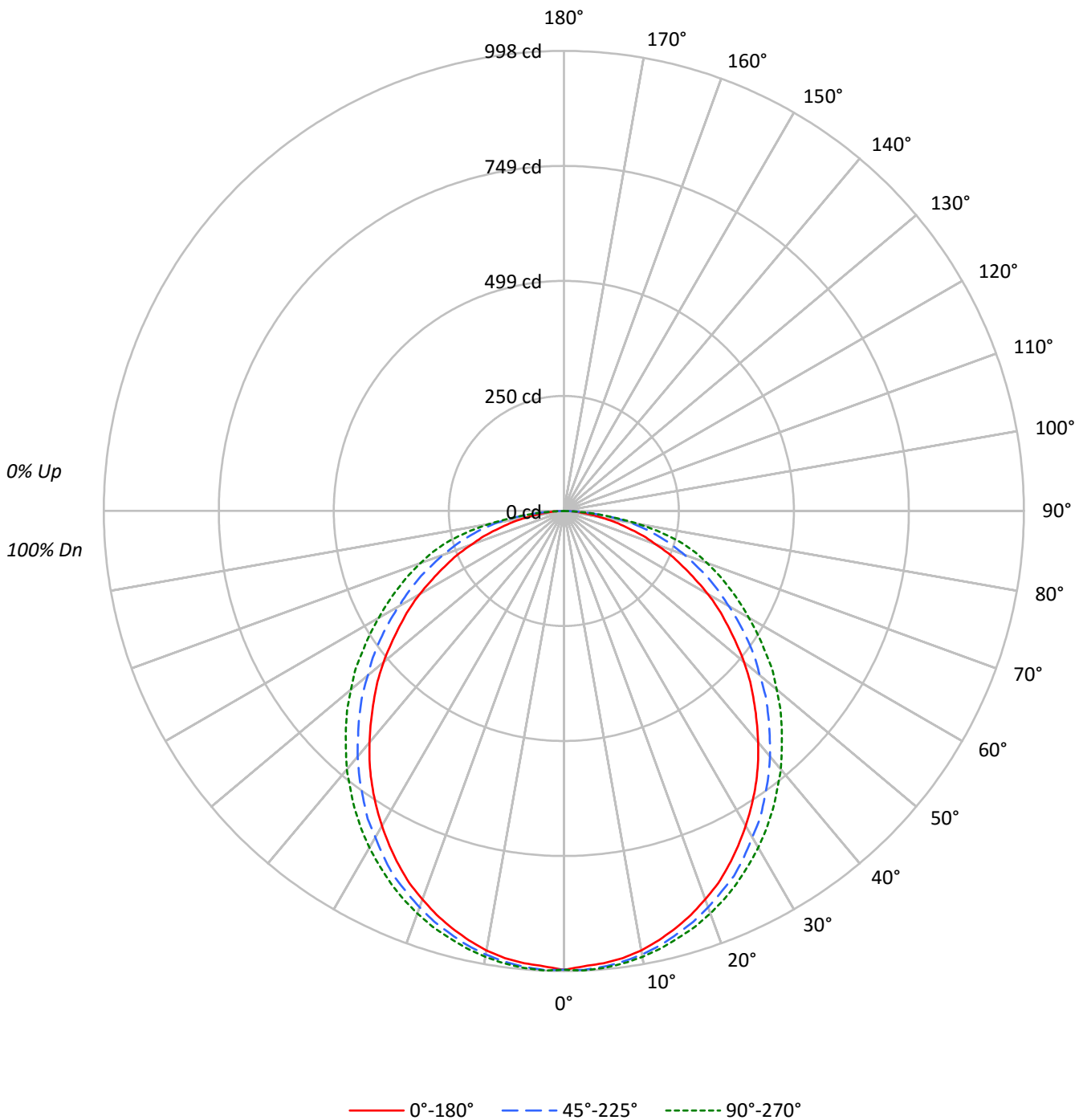
Input Watts (W): 22.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2678	2678	2678
5°	2660	2681	2688
10°	2645	2669	2684
15°	2610	2646	2671
20°	2568	2620	2660
25°	2516	2593	2643
30°	2452	2541	2621
35°	2384	2494	2597
40°	2303	2444	2572
45°	2219	2387	2544
50°	2137	2322	2522
55°	2037	2280	2504
60°	1946	2224	2497
65°	1815	2211	2525
70°	1672	2192	2600
75°	1509	2223	2734
80°	1305	2289	2569
85°	1081	1920	1920



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.1	3.4
10°-20°	267.8	9.6
20°-30°	400.7	14.4
30°-40°	474.5	17.1
40°-50°	483.6	17.4
50°-60°	433.4	15.6
60°-70°	339.4	12.2
70°-80°	218.8	7.9
80°-90°	64.6	2.3
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°	762.6	27.5
0°-40°	1237.1	44.5
0°-60°	2154.2	77.6
0°-90°	2777.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2777.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	995	995	995	995	995	
5°	985	987	992	994	995	93
15°	937	942	950	958	959	264
25°	847	855	873	885	890	390
35°	726	735	759	783	790	453
45°	583	596	627	660	669	450
55°	434	448	486	520	534	389
65°	285	302	347	381	396	283
75°	145	167	214	250	263	156
85°	35	48	62	62	62	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	995.1	995.1	995.1	995.1	995.1
2.5°	988.6	991.2	996.4	997.7	997.7
5°	984.7	987.3	992.5	993.8	995.1
7.5°	978.2	979.5	986.0	988.6	989.9
10°	967.9	970.5	976.9	980.8	982.1
12.5°	953.6	957.5	965.3	970.5	971.8
15°	936.8	942.0	949.7	957.5	958.8
17.5°	918.6	923.8	934.2	943.3	945.8
20°	896.6	903.1	914.8	925.1	929.0
22.5°	874.6	879.8	894.0	907.0	910.9
25°	847.4	855.2	873.3	885.0	890.1
27.5°	818.9	827.9	846.1	861.6	866.8
30°	789.1	798.1	817.6	837.0	843.5
32.5°	758.0	768.3	791.7	811.1	817.6
35°	725.6	734.7	759.3	782.6	790.4
37.5°	691.9	699.7	728.2	752.8	760.6
40°	655.6	666.0	695.8	724.3	732.1
42.5°	619.3	631.0	660.8	691.9	699.7
45°	583.1	596.0	627.1	659.5	668.6
47.5°	548.1	558.4	593.4	624.5	637.5
50°	510.5	520.9	554.6	589.5	602.5
52.5°	471.6	485.9	522.2	555.8	571.4
55°	434.1	448.3	485.9	519.6	533.8
57.5°	399.1	410.7	449.6	484.6	498.8
60°	361.5	371.9	413.3	450.9	463.9
62.5°	321.3	336.9	379.6	414.6	430.2
65°	285.1	301.9	347.2	380.9	396.5
67.5°	251.4	266.9	311.0	347.2	364.1
70°	212.5	233.2	278.6	314.9	330.4
72.5°	181.4	199.5	246.2	282.5	299.3
75°	145.1	167.1	213.8	250.1	263.0
77.5°	115.3	137.3	181.4	209.9	216.4
80°	84.2	106.2	147.7	162.0	165.8
82.5°	57.0	77.7	106.2	110.1	111.4
85°	35.0	47.9	62.2	62.2	62.2
87.5°	16.8	19.4	22.0	20.7	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)