

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: P312942

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-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: P312942  
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-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

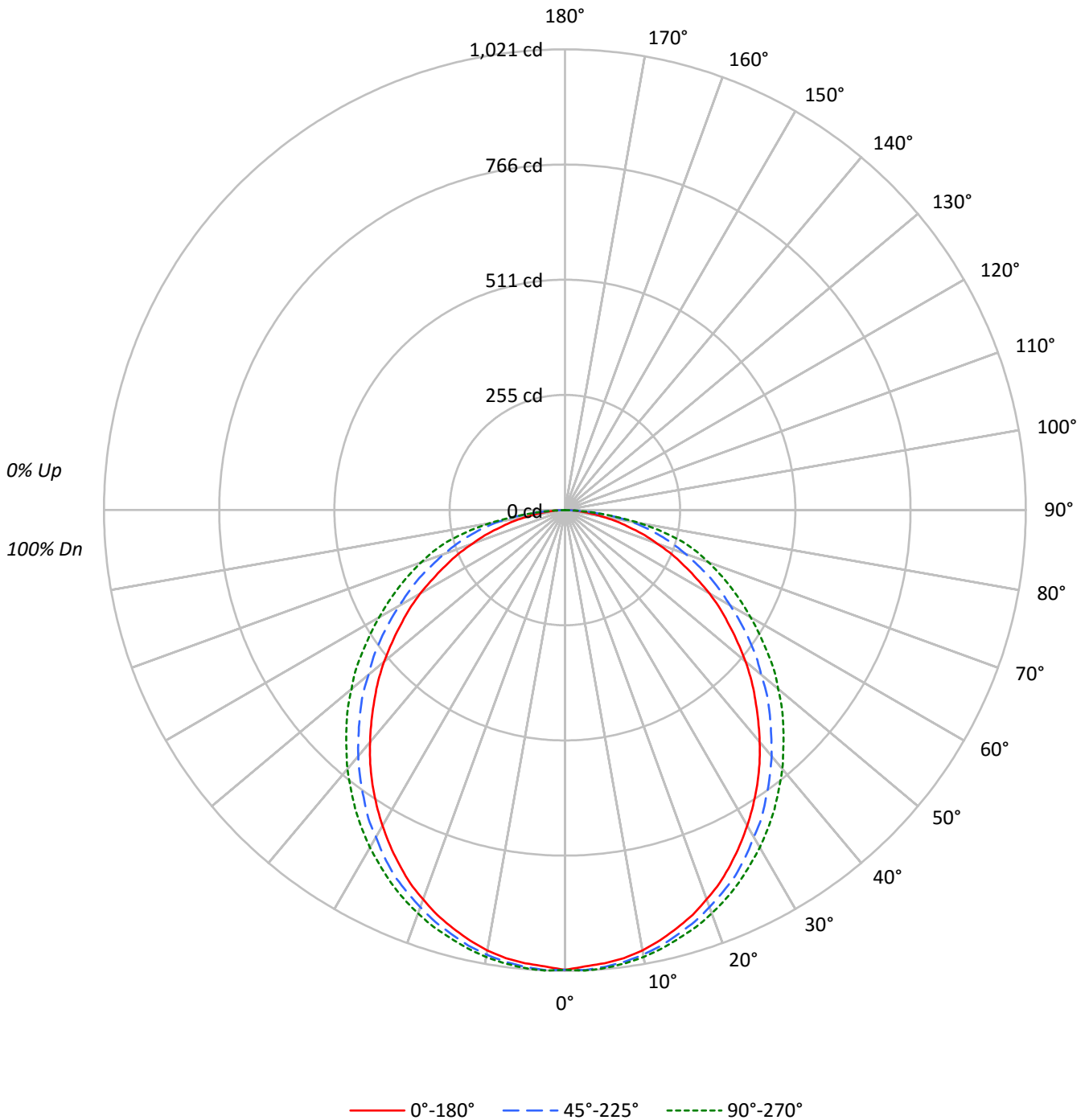
Lumens per Lamp: N/A  
Luminaire Lumens: 2843.0 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2741	2741	2741
5°	2723	2745	2752
10°	2708	2733	2748
15°	2672	2709	2735
20°	2629	2682	2724
25°	2576	2654	2706
30°	2510	2601	2683
35°	2440	2553	2658
40°	2358	2502	2633
45°	2272	2443	2605
50°	2188	2377	2582
55°	2085	2334	2564
60°	1992	2277	2556
65°	1858	2264	2585
70°	1711	2244	2662
75°	1545	2276	2800
80°	1336	2343	2631
85°	1105	1967	1967



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.3	3.4
10°-20°	274.2	9.6
20°-30°	410.2	14.4
30°-40°	485.8	17.1
40°-50°	495.1	17.4
50°-60°	443.7	15.6
60°-70°	347.4	12.2
70°-80°	224.0	7.9
80°-90°	66.2	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°	780.7	27.5
0°-40°	1266.5	44.5
0°-60°	2205.4	77.6
0°-90°	2843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2843.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1008	1011	1016	1017	1019	96
15°	959	964	972	980	982	270
25°	868	876	894	906	911	399
35°	743	752	777	801	809	464
45°	597	610	642	675	684	461
55°	444	459	497	532	546	398
65°	292	309	356	390	406	290
75°	149	171	219	256	269	159
85°	36	49	64	64	64	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1018.7	1018.7	1018.7	1018.7	1018.7
2.5°	1012.1	1014.8	1020.1	1021.4	1021.4
5°	1008.1	1010.8	1016.1	1017.4	1018.7
7.5°	1001.5	1002.8	1009.5	1012.1	1013.4
10°	990.9	993.5	1000.2	1004.1	1005.5
12.5°	976.3	980.3	988.2	993.5	994.9
15°	959.0	964.3	972.3	980.3	981.6
17.5°	940.5	945.8	956.4	965.7	968.3
20°	917.9	924.6	936.5	947.1	951.1
22.5°	895.4	900.7	915.3	928.5	932.5
25°	867.5	875.5	894.0	906.0	911.3
27.5°	838.3	847.6	866.2	882.1	887.4
30°	807.8	817.1	837.0	856.9	863.5
32.5°	776.0	786.6	810.5	830.4	837.0
35°	742.8	752.1	777.3	801.2	809.2
37.5°	708.3	716.3	745.5	770.7	778.6
40°	671.2	681.8	712.3	741.5	749.5
42.5°	634.1	646.0	676.5	708.3	716.3
45°	596.9	610.2	642.0	675.2	684.5
47.5°	561.1	571.7	607.5	639.4	652.6
50°	522.6	533.2	567.7	603.5	616.8
52.5°	482.8	497.4	534.6	569.1	585.0
55°	444.4	459.0	497.4	531.9	546.5
57.5°	408.6	420.5	460.3	496.1	510.7
60°	370.1	380.7	423.1	461.6	474.9
62.5°	329.0	344.9	388.7	424.5	440.4
65°	291.8	309.1	355.5	390.0	405.9
67.5°	257.3	273.3	318.4	355.5	372.7
70°	217.5	238.8	285.2	322.3	338.3
72.5°	185.7	204.3	252.0	289.2	306.4
75°	148.6	171.1	218.9	256.0	269.3
77.5°	118.1	140.6	185.7	214.9	221.5
80°	86.2	108.8	151.2	165.8	169.8
82.5°	58.4	79.6	108.8	112.8	114.1
85°	35.8	49.1	63.7	63.7	63.7
87.5°	17.2	19.9	22.6	21.2	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)