

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: P312212

Luminaire Tested: **14FCZ2-29-UNV-L83050-CP250-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: P312212  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 14FCZ2-29-UNV-L83050-CP250-W2A-U-4000K  
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" 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**

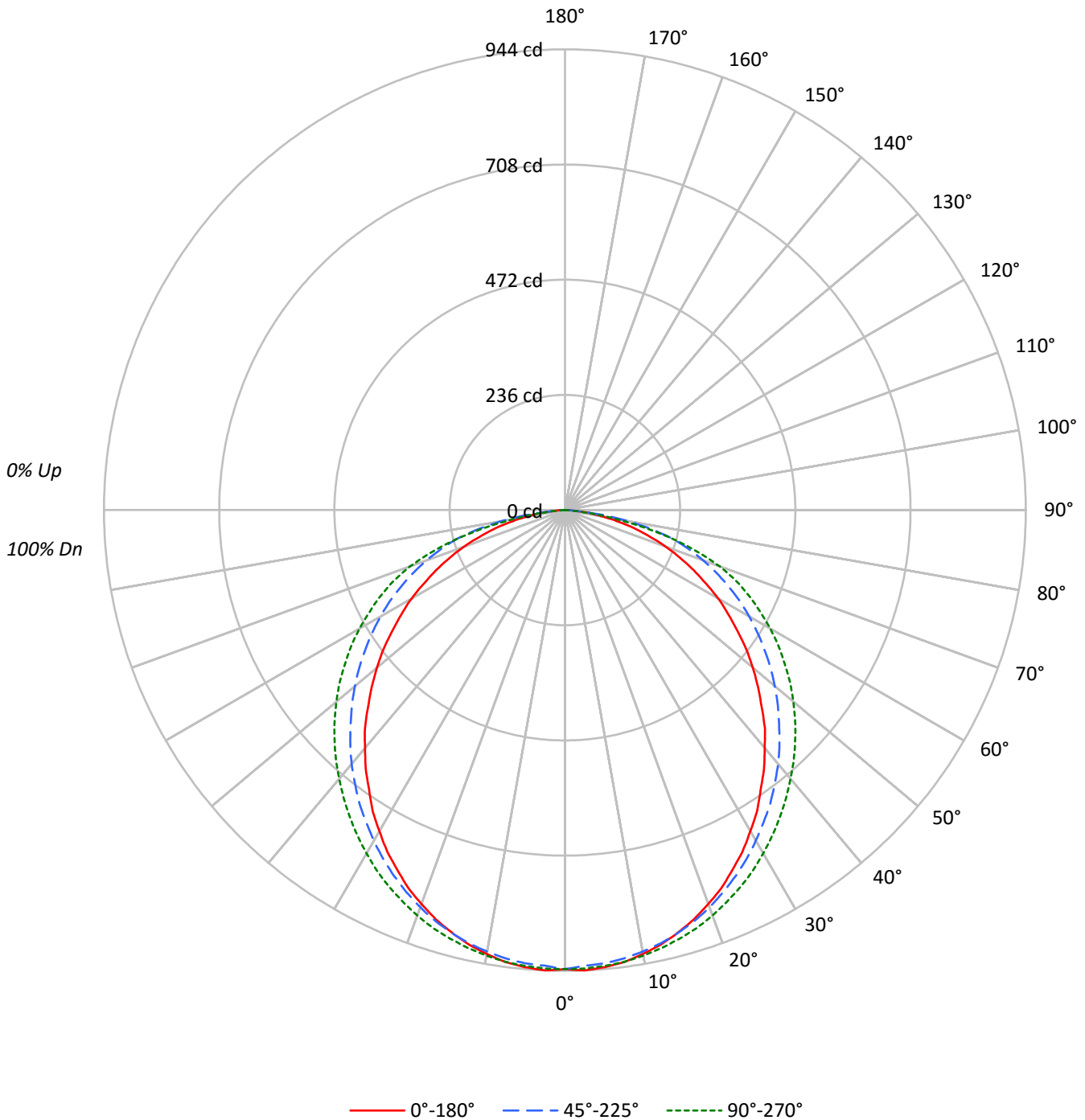
Lumens per Lamp: N/A  
Luminaire Lumens: 2730.0 lumens  
Efficiency: N/A  
Efficacy: 112.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 24.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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	109	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	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	39	31	26	37	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2531	2531	2531
5°	2539	2518	2532
10°	2523	2510	2533
15°	2496	2498	2532
20°	2460	2481	2531
25°	2413	2456	2529
30°	2361	2431	2523
35°	2298	2410	2522
40°	2237	2386	2525
45°	2168	2361	2539
50°	2105	2350	2556
55°	2025	2342	2579
60°	1953	2346	2615
65°	1853	2353	2655
70°	1739	2371	2653
75°	1576	2392	2399
80°	1292	2066	1708
85°	957	979	395



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	3.3
10°-20°	254.2	9.3
20°-30°	383.0	14.0
30°-40°	459.6	16.8
40°-50°	479.0	17.5
50°-60°	443.4	16.2
60°-70°	358.3	13.1
70°-80°	218.5	8.0
80°-90°	45.1	1.7
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°	726.2	26.6
0°-40°	1185.8	43.4
0°-60°	2108.2	77.2
0°-90°	2730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2730.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	940	938	932	939	938	89
15°	896	897	897	909	909	253
25°	813	818	827	848	852	375
35°	699	710	734	760	768	438
45°	570	587	620	655	667	440
55°	432	454	499	538	550	387
65°	291	320	370	407	417	288
75°	152	185	230	234	231	159
85°	31	46	32	18	13	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	940.5	940.5	940.5	940.5	940.5
2.5°	944.1	941.1	934.4	941.1	939.9
5°	939.9	937.5	932.0	938.7	937.5
7.5°	933.8	931.4	926.5	934.4	933.2
10°	923.4	922.2	918.6	927.7	927.1
12.5°	911.3	910.7	908.8	919.2	918.6
15°	896.1	896.7	896.7	908.8	908.8
17.5°	879.0	880.2	882.7	896.1	897.9
20°	858.9	861.4	866.2	881.4	883.9
22.5°	838.2	840.1	847.4	865.6	868.1
25°	812.7	817.5	827.3	848.0	851.6
27.5°	788.3	792.6	806.0	827.3	833.4
30°	759.7	766.4	782.2	805.4	812.1
32.5°	732.3	739.6	757.9	784.7	790.7
35°	699.4	710.4	733.5	760.3	767.6
37.5°	669.6	680.0	706.1	735.4	743.9
40°	636.7	649.5	679.3	710.4	718.9
42.5°	606.3	618.5	650.7	682.4	694.0
45°	569.8	586.8	620.3	655.0	667.2
47.5°	536.3	553.3	591.7	628.8	639.8
50°	502.8	521.1	561.3	599.6	610.6
52.5°	468.1	487.6	530.8	569.2	581.9
55°	431.6	454.1	499.2	538.1	549.7
57.5°	396.9	420.0	468.1	507.7	519.3
60°	362.8	386.5	435.9	473.6	485.8
62.5°	325.1	353.1	404.2	441.3	450.5
65°	291.0	319.6	369.5	406.6	417.0
67.5°	255.1	286.1	336.0	370.1	379.8
70°	221.0	253.2	301.3	333.0	337.2
72.5°	184.4	217.3	266.0	286.1	286.1
75°	151.6	185.1	230.1	233.8	230.7
77.5°	115.7	152.8	182.0	174.7	167.4
80°	83.4	119.9	133.3	119.9	110.2
82.5°	56.0	87.0	80.4	63.9	56.6
85°	31.0	46.3	31.7	17.7	12.8
87.5°	11.6	10.3	3.0	3.0	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)