

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: P312206

Luminaire Tested: **14FCZ2-29-UNV-L83050-CP187-W2A-U-3500K**

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: P312206  
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-CP187-W2A-U-3500K  
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 3500K 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**

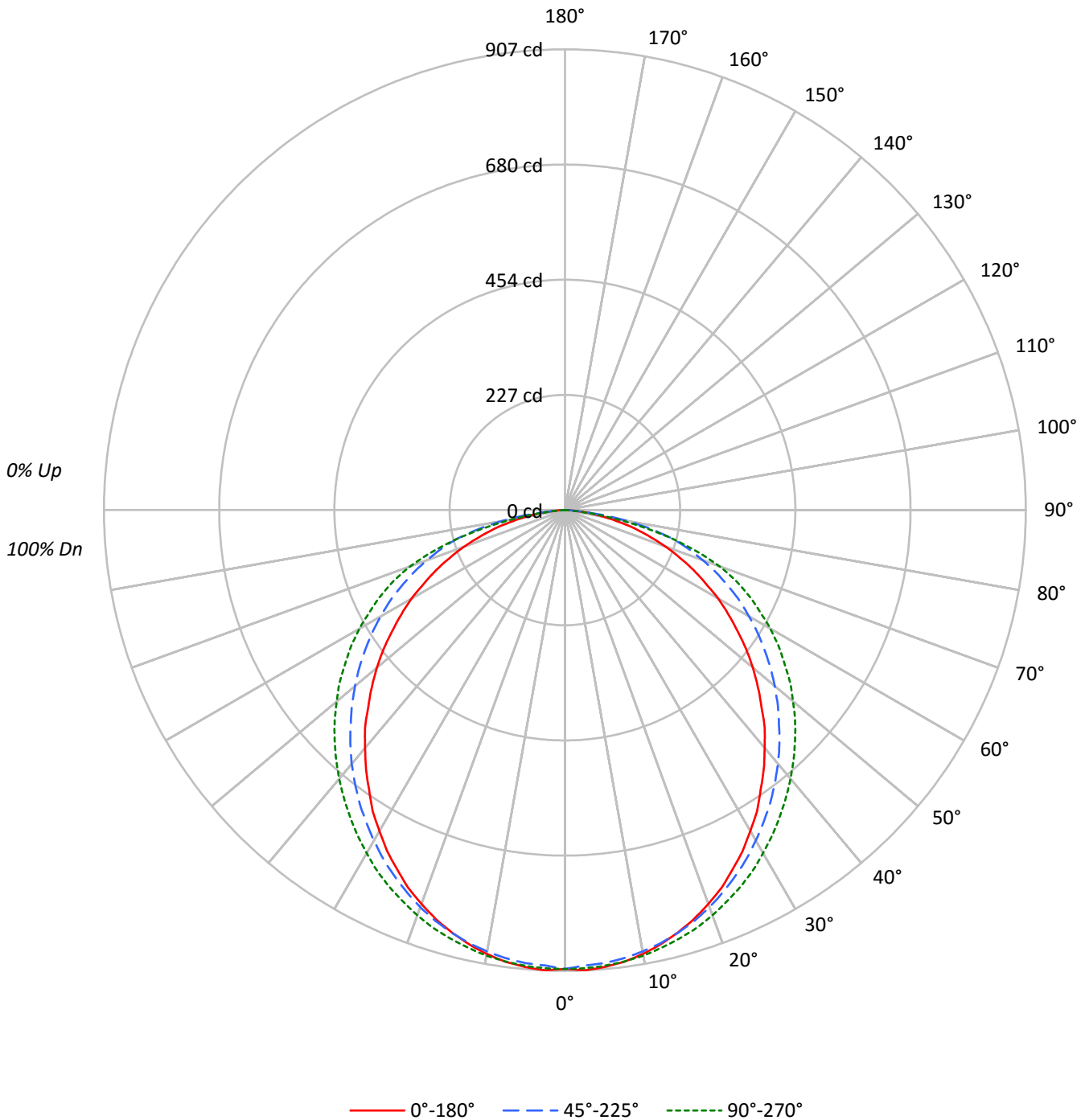
Lumens per Lamp: N/A  
Luminaire Lumens: 2622.0 lumens  
Efficiency: N/A  
Efficacy: 110.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2431	2431	2431
5°	2438	2418	2432
10°	2423	2411	2433
15°	2398	2399	2432
20°	2362	2383	2431
25°	2317	2359	2428
30°	2267	2334	2423
35°	2207	2314	2422
40°	2148	2292	2426
45°	2082	2267	2439
50°	2022	2256	2455
55°	1945	2249	2477
60°	1876	2253	2511
65°	1780	2260	2550
70°	1670	2277	2548
75°	1514	2298	2304
80°	1241	1984	1640
85°	920	939	380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.5	3.3
10°-20°	244.2	9.3
20°-30°	367.8	14.0
30°-40°	441.4	16.8
40°-50°	460.0	17.5
50°-60°	425.9	16.2
60°-70°	344.1	13.1
70°-80°	209.8	8.0
80°-90°	43.3	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°	697.4	26.6
0°-40°	1138.8	43.4
0°-60°	2024.8	77.2
0°-90°	2622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2622.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	903	900	895	902	900	86
15°	861	861	861	873	873	243
25°	780	785	794	814	818	360
35°	672	682	704	730	737	421
45°	547	564	596	629	641	423
55°	414	436	479	517	528	371
65°	280	307	355	390	400	276
75°	146	178	221	224	222	153
85°	30	44	30	17	12	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	903.3	903.3	903.3	903.3	903.3
2.5°	906.8	903.9	897.4	903.9	902.7
5°	902.7	900.4	895.1	901.5	900.4
7.5°	896.9	894.5	889.8	897.4	896.3
10°	886.9	885.7	882.2	891.0	890.4
12.5°	875.2	874.6	872.9	882.8	882.2
15°	860.6	861.2	861.2	872.9	872.9
17.5°	844.2	845.4	847.7	860.6	862.4
20°	824.9	827.3	832.0	846.6	848.9
22.5°	805.1	806.8	813.8	831.4	833.7
25°	780.5	785.2	794.5	814.4	817.9
27.5°	757.1	761.2	774.1	794.5	800.4
30°	729.6	736.1	751.3	773.5	779.9
32.5°	703.3	710.4	727.9	753.6	759.5
35°	671.8	682.3	704.5	730.2	737.2
37.5°	643.1	653.1	678.2	706.3	714.4
40°	611.5	623.8	652.5	682.3	690.5
42.5°	582.3	594.0	625.0	655.4	666.5
45°	547.2	563.6	595.8	629.1	640.8
47.5°	515.1	531.4	568.3	603.9	614.5
50°	482.9	500.5	539.0	575.9	586.4
52.5°	449.6	468.3	509.8	546.6	558.9
55°	414.5	436.2	479.4	516.8	527.9
57.5°	381.2	403.4	449.6	487.6	498.7
60°	348.5	371.3	418.6	454.9	466.6
62.5°	312.2	339.1	388.2	423.9	432.6
65°	279.5	306.9	354.9	390.5	400.5
67.5°	245.0	274.8	322.7	355.5	364.8
70°	212.2	243.2	289.4	319.8	323.9
72.5°	177.1	208.7	255.5	274.8	274.8
75°	145.6	177.7	221.0	224.5	221.6
77.5°	111.1	146.7	174.8	167.8	160.8
80°	80.1	115.2	128.0	115.2	105.8
82.5°	53.8	83.6	77.2	61.4	54.4
85°	29.8	44.4	30.4	17.0	12.3
87.5°	11.1	9.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)