

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: P312205

Luminaire Tested: **14FCZ2-29-UNV-L83050-CP187-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: P312205  
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-3000K  
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" 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

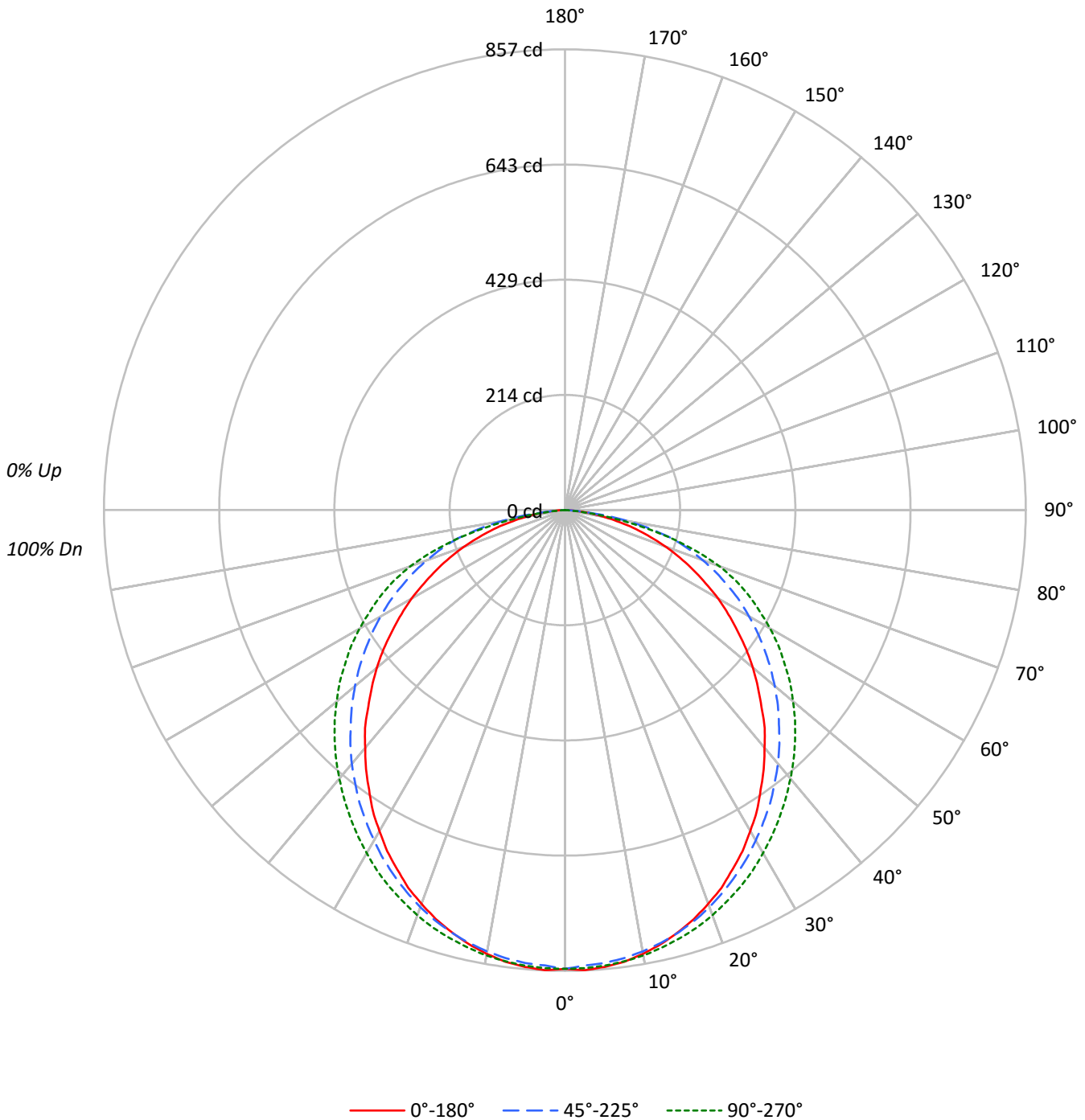
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2477.0 lumens  
Efficiency: N/A  
Efficacy: 104.1 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°	2296	2296	2296
5°	2304	2284	2298
10°	2290	2278	2299
15°	2265	2267	2297
20°	2232	2251	2297
25°	2189	2229	2294
30°	2142	2205	2289
35°	2085	2186	2288
40°	2029	2165	2291
45°	1968	2142	2304
50°	1910	2132	2319
55°	1837	2125	2340
60°	1772	2129	2372
65°	1681	2135	2409
70°	1578	2151	2408
75°	1430	2171	2176
80°	1173	1875	1550
85°	871	886	358



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.7	3.3
10°-20°	230.7	9.3
20°-30°	347.5	14.0
30°-40°	417.0	16.8
40°-50°	434.6	17.5
50°-60°	402.3	16.2
60°-70°	325.1	13.1
70°-80°	198.2	8.0
80°-90°	40.9	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°	658.9	26.6
0°-40°	1075.9	43.4
0°-60°	1912.8	77.2
0°-90°	2477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2477.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	853	851	846	852	851	81
15°	813	814	814	825	825	229
25°	737	742	751	769	773	340
35°	635	645	666	690	696	398
45°	517	532	563	594	605	400
55°	392	412	453	488	499	351
65°	264	290	335	369	378	261
75°	138	168	209	212	209	144
85°	28	42	29	16	12	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	853.3	853.3	853.3	853.3	853.3
2.5°	856.6	853.9	847.8	853.9	852.8
5°	852.8	850.6	845.6	851.7	850.6
7.5°	847.3	845.0	840.6	847.8	846.7
10°	837.9	836.8	833.5	841.7	841.2
12.5°	826.8	826.3	824.6	834.0	833.5
15°	813.0	813.6	813.6	824.6	824.6
17.5°	797.6	798.7	800.9	813.0	814.7
20°	779.3	781.5	786.0	799.8	802.0
22.5°	760.5	762.2	768.8	785.4	787.6
25°	737.3	741.8	750.6	769.4	772.7
27.5°	715.3	719.1	731.3	750.6	756.1
30°	689.3	695.4	709.7	730.7	736.8
32.5°	664.4	671.1	687.6	711.9	717.5
35°	634.6	644.6	665.5	689.8	696.5
37.5°	607.6	616.9	640.7	667.2	674.9
40°	577.7	589.3	616.4	644.6	652.3
42.5°	550.1	561.2	590.4	619.2	629.6
45°	517.0	532.4	562.8	594.3	605.3
47.5°	486.6	502.1	536.9	570.5	580.5
50°	456.2	472.8	509.2	544.0	554.0
52.5°	424.7	442.4	481.6	516.4	528.0
55°	391.6	412.0	452.9	488.3	498.7
57.5°	360.1	381.1	424.7	460.6	471.1
60°	329.2	350.7	395.5	429.7	440.8
62.5°	294.9	320.3	366.7	400.4	408.7
65°	264.0	290.0	335.3	368.9	378.3
67.5°	231.4	259.6	304.9	335.8	344.6
70°	200.5	229.8	273.4	302.1	306.0
72.5°	167.4	197.2	241.4	259.6	259.6
75°	137.5	167.9	208.8	212.1	209.3
77.5°	104.9	138.6	165.1	158.5	151.9
80°	75.7	108.8	121.0	108.8	100.0
82.5°	50.8	79.0	72.9	58.0	51.4
85°	28.2	42.0	28.7	16.0	11.6
87.5°	10.5	9.4	2.8	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)