

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: P311892

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-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: P311892  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)  
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-HRP-CA08-W2A-U-4000K  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

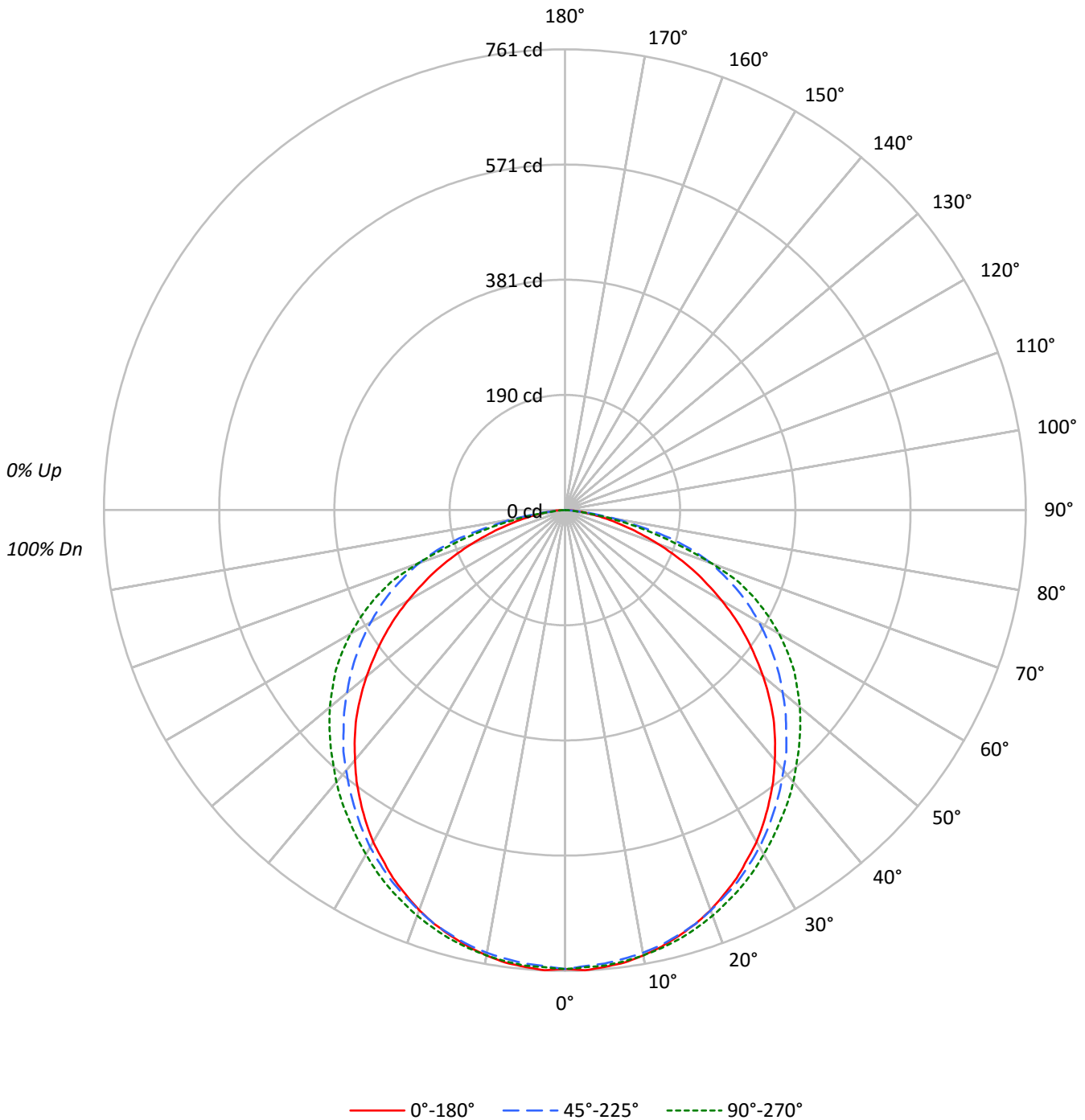
Lumens per Lamp: N/A  
Luminaire Lumens: 2232.0 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 24.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P311892

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-HRP-CA08-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P311892

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-HRP-CA08-W2A-U-4000K

**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	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	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	38	31	26	37	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2040	2040	2040
5°	2046	2031	2040
10°	2041	2029	2041
15°	2028	2024	2043
20°	2014	2016	2042
25°	1992	2009	2042
30°	1967	1998	2041
35°	1932	1983	2045
40°	1893	1972	2061
45°	1854	1966	2083
50°	1789	1966	2121
55°	1712	1976	2167
60°	1609	1991	2195
65°	1484	2011	2208
70°	1292	2016	2032
75°	1066	1876	1642
80°	837	1348	1099
85°	651	519	259



TEST NUMBER: P311892

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-HRP-CA08-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.8	3.2
10°-20°	205.9	9.2
20°-30°	312.7	14.0
30°-40°	378.9	17.0
40°-50°	399.3	17.9
50°-60°	372.7	16.7
60°-70°	297.9	13.3
70°-80°	163.9	7.3
80°-90°	28.9	1.3
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°	590.4	26.5
0°-40°	969.3	43.4
0°-60°	1741.3	78.0
0°-90°	2232.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2232.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	757	755	752	757	755	72
15°	728	728	726	733	733	205
25°	671	672	677	686	688	309
35°	588	594	604	619	622	368
45°	487	496	517	540	547	375
55°	365	383	421	451	462	326
65°	233	262	316	342	347	229
75°	102	147	180	162	158	110
85°	21	27	17	10	8	26
90°	0	0	0	0	0	



TEST NUMBER: P311892

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-HRP-CA08-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	758.0	758.0	758.0	758.0	758.0
2.5°	760.8	758.7	753.8	758.0	755.9
5°	757.3	755.2	751.7	756.6	755.2
7.5°	753.8	751.0	747.5	753.1	751.7
10°	746.8	744.7	742.6	747.5	746.8
12.5°	738.3	737.6	735.5	741.2	740.5
15°	727.8	727.8	726.4	733.4	733.4
17.5°	716.6	715.9	716.6	724.3	723.6
20°	703.3	703.3	704.0	713.1	713.1
22.5°	687.1	687.8	689.9	701.1	700.4
25°	671.0	672.4	676.6	686.4	687.8
27.5°	651.3	654.8	659.7	671.7	673.1
30°	633.1	635.2	642.9	654.1	656.9
32.5°	611.3	615.5	623.9	636.6	640.1
35°	588.2	593.8	603.6	619.0	622.5
37.5°	565.0	569.9	583.2	599.4	605.7
40°	539.0	547.4	561.5	579.7	586.7
42.5°	513.8	522.2	541.1	560.1	566.4
45°	487.1	496.2	516.6	539.7	547.4
47.5°	457.6	468.1	494.1	518.7	527.1
50°	427.4	440.8	469.5	496.9	506.7
52.5°	395.8	412.7	445.7	474.5	483.6
55°	365.0	383.2	421.1	450.6	461.8
57.5°	333.4	353.0	395.8	429.5	435.8
60°	299.0	322.9	369.9	399.4	407.8
62.5°	265.3	292.7	343.2	371.3	378.3
65°	233.0	262.5	315.8	341.8	346.7
67.5°	197.9	233.0	285.7	309.5	310.9
70°	164.2	204.9	256.2	267.4	258.3
72.5°	131.2	174.8	221.8	212.7	204.9
75°	102.5	146.7	180.4	162.1	157.9
77.5°	75.8	120.0	129.1	119.3	111.6
80°	54.0	94.7	87.0	74.4	70.9
82.5°	37.2	59.7	47.7	37.2	32.3
85°	21.1	26.7	16.8	10.5	8.4
87.5°	9.1	6.3	3.5	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)