

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: P312341

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-CA08-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: P312341
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
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-S-CA08-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.08" ACRYLIC 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

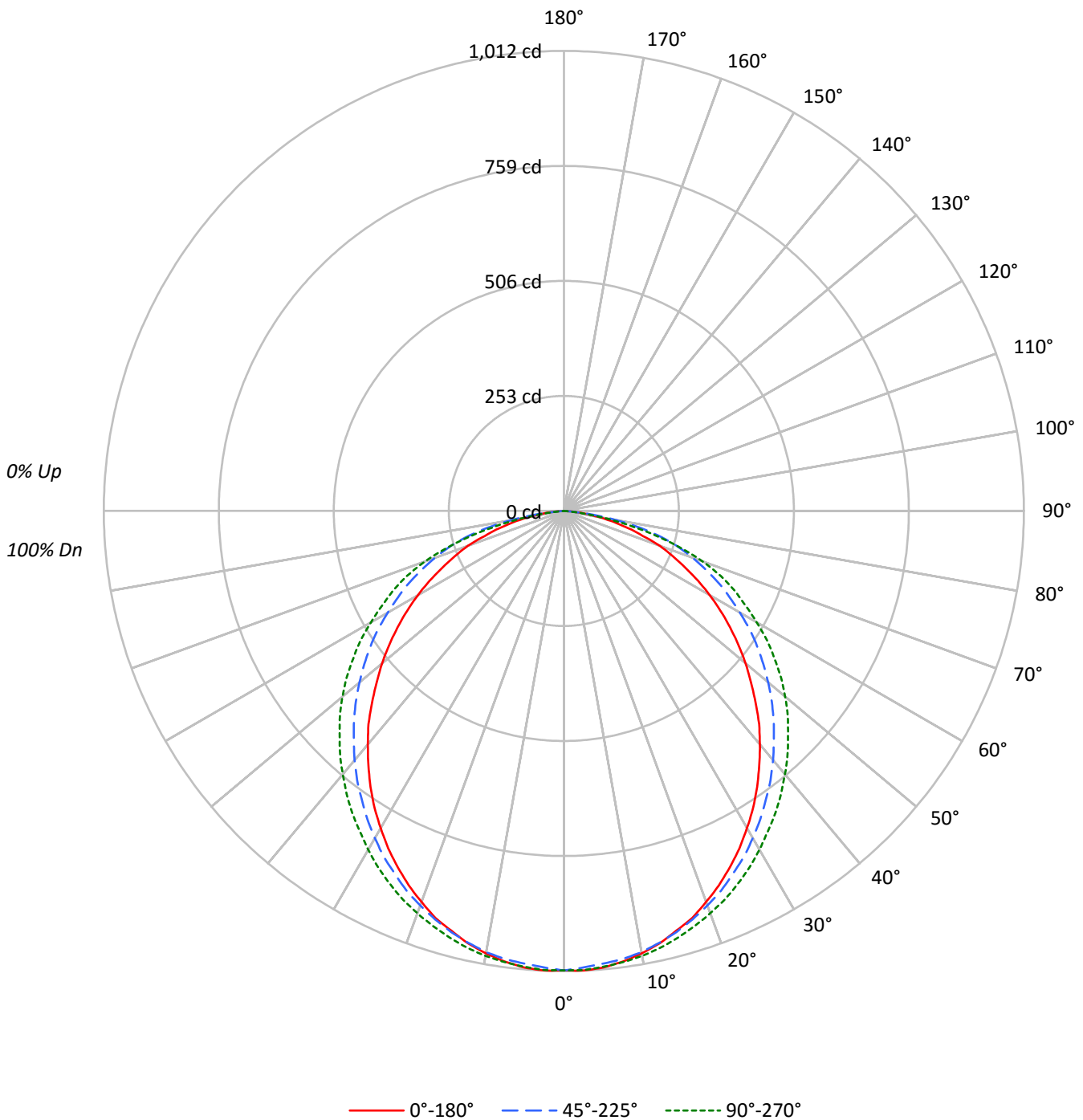
Lumens per Lamp: N/A
Luminaire Lumens: 2831.0 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): 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	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	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	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2720	2720	2720
5°	2722	2700	2719
10°	2700	2693	2716
15°	2663	2671	2706
20°	2621	2645	2697
25°	2567	2613	2688
30°	2504	2582	2673
35°	2435	2545	2665
40°	2357	2515	2658
45°	2270	2484	2655
50°	2186	2456	2662
55°	2094	2436	2654
60°	1995	2403	2637
65°	1877	2395	2637
70°	1767	2375	2562
75°	1533	2321	2189
80°	1240	1870	1457
85°	824	651	432



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.4	3.4
10°-20°	271.6	9.6
20°-30°	407.3	14.4
30°-40°	485.9	17.2
40°-50°	502.3	17.7
50°-60°	458.6	16.2
60°-70°	360.9	12.7
70°-80°	210.1	7.4
80°-90°	38.7	1.4
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°	774.3	27.4
0°-40°	1260.3	44.5
0°-60°	2221.3	78.5
0°-90°	2831.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2831.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1008	1005	999	1008	1006	96
15°	956	957	959	971	971	270
25°	865	869	880	901	905	398
35°	741	751	775	804	811	463
45°	596	616	653	689	698	461
55°	446	470	519	557	566	399
65°	295	326	376	406	414	293
75°	147	182	223	219	210	157
85°	27	38	21	17	14	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.6	1010.6	1010.6	1010.6	1010.6
2.5°	1012.0	1009.2	1005.0	1012.0	1010.6
5°	1007.8	1005.0	999.4	1007.8	1006.4
7.5°	999.4	996.6	993.8	1002.2	1000.8
10°	988.2	986.8	985.4	995.2	993.8
12.5°	974.1	974.1	972.7	984.0	984.0
15°	955.9	957.3	958.7	971.3	971.3
17.5°	939.0	937.6	941.8	955.9	957.3
20°	915.2	918.0	923.6	940.4	941.8
22.5°	891.3	894.1	903.9	920.8	925.0
25°	864.6	868.9	880.1	901.1	905.3
27.5°	836.6	842.2	857.6	880.1	884.3
30°	805.7	814.1	831.0	856.2	860.4
32.5°	774.8	783.2	804.3	829.6	835.2
35°	741.1	750.9	774.8	804.3	811.3
37.5°	706.0	718.7	746.7	776.2	784.6
40°	670.9	685.0	715.9	746.7	756.6
42.5°	635.8	649.9	683.6	718.7	728.5
45°	596.5	616.2	652.7	689.2	697.6
47.5°	558.6	579.7	620.4	656.9	668.1
50°	522.2	543.2	586.7	624.6	635.8
52.5°	484.3	506.7	553.0	592.3	602.2
55°	446.4	470.2	519.3	557.2	565.7
57.5°	408.5	433.7	484.3	520.8	530.6
60°	370.6	397.2	446.4	482.9	489.9
62.5°	332.7	360.7	411.3	443.5	450.6
65°	294.8	325.6	376.2	405.7	414.1
67.5°	258.3	289.1	338.3	366.3	373.4
70°	224.6	252.7	301.8	322.8	325.6
72.5°	182.5	217.6	265.3	276.5	269.5
75°	147.4	182.5	223.2	219.0	210.5
77.5°	112.3	147.4	174.1	160.0	148.8
80°	80.0	115.1	120.7	99.7	94.0
82.5°	51.9	80.0	67.4	51.9	42.1
85°	26.7	37.9	21.1	16.8	14.0
87.5°	8.4	5.6	2.8	2.8	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)