

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: P312186

Luminaire Tested: **14FCZ2-25-UNV-L83050-CP250-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: P312186  
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: 14FCZ2-25-UNV-L83050-CP250-W2A-U-3500K  
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" 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

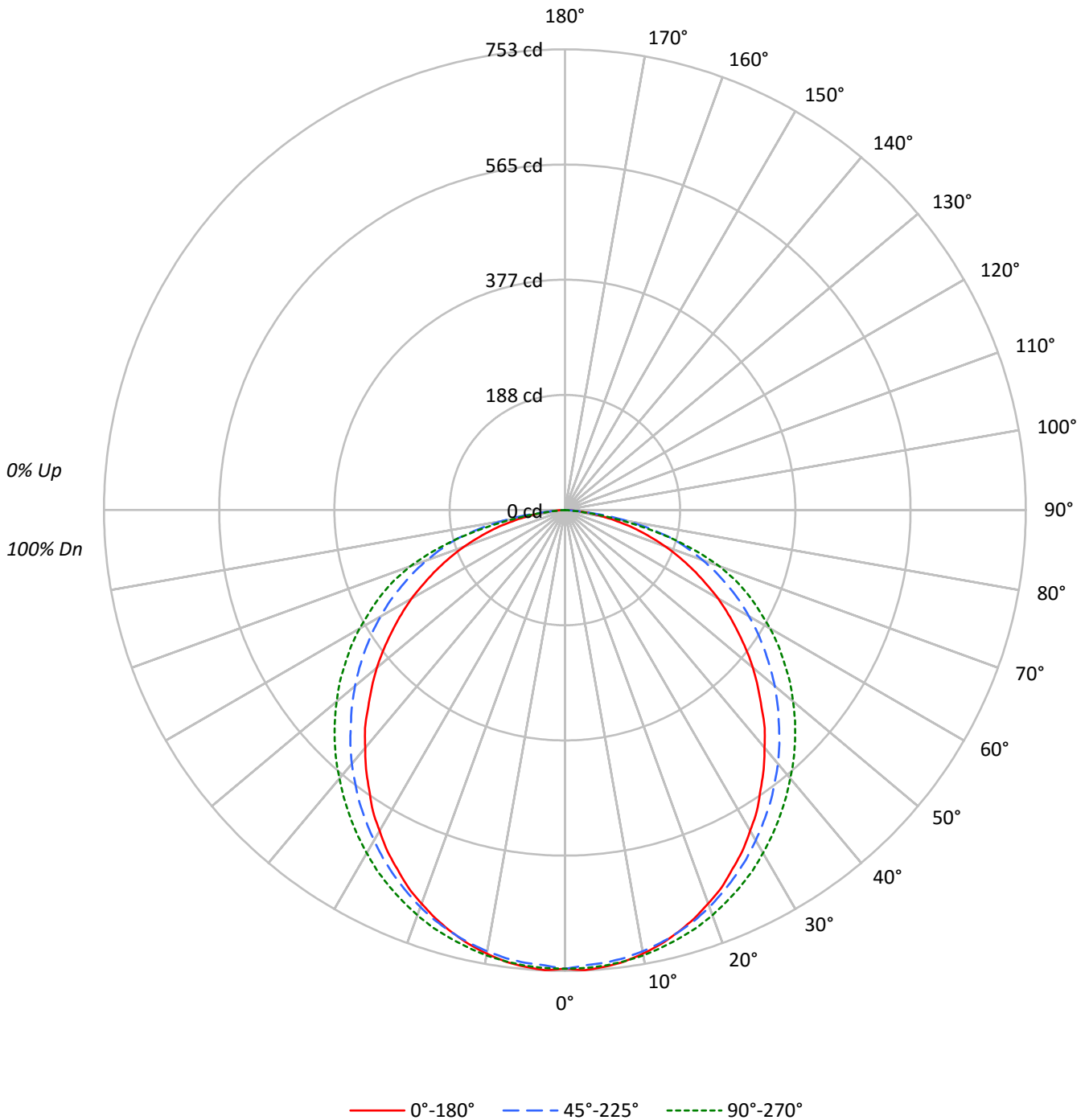
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2176.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 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): 19.6  
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°	2017	2017	2017
5°	2024	2006	2018
10°	2011	2001	2019
15°	1990	1991	2018
20°	1960	1977	2017
25°	1923	1958	2015
30°	1881	1937	2011
35°	1831	1921	2010
40°	1783	1902	2013
45°	1729	1881	2024
50°	1678	1873	2038
55°	1614	1867	2055
60°	1556	1870	2084
65°	1477	1875	2117
70°	1386	1890	2115
75°	1256	1907	1912
80°	1031	1647	1361
85°	763	778	315



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.9	3.3
10°-20°	202.6	9.3
20°-30°	305.2	14.0
30°-40°	366.3	16.8
40°-50°	381.8	17.5
50°-60°	353.5	16.2
60°-70°	285.6	13.1
70°-80°	174.1	8.0
80°-90°	35.9	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°	578.8	26.6
0°-40°	945.1	43.4
0°-60°	1680.4	77.2
0°-90°	2176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2176.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	750	750	750	750	750	
5°	749	747	743	748	747	71
15°	714	715	715	724	724	201
25°	648	652	659	676	679	299
35°	558	566	585	606	612	349
45°	454	468	494	522	532	351
55°	344	362	398	429	438	308
65°	232	255	294	324	332	229
75°	121	148	183	186	184	127
85°	25	37	25	14	10	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	749.6	749.6	749.6	749.6	749.6
2.5°	752.6	750.1	744.8	750.1	749.2
5°	749.2	747.2	742.8	748.2	747.2
7.5°	744.3	742.4	738.5	744.8	743.8
10°	736.1	735.1	732.2	739.4	739.0
12.5°	726.3	725.9	724.4	732.7	732.2
15°	714.2	714.7	714.7	724.4	724.4
17.5°	700.6	701.6	703.5	714.2	715.7
20°	684.6	686.6	690.4	702.6	704.5
22.5°	668.1	669.6	675.4	690.0	691.9
25°	647.7	651.6	659.4	675.9	678.8
27.5°	628.3	631.7	642.4	659.4	664.2
30°	605.5	610.9	623.5	641.9	647.3
32.5°	583.7	589.5	604.1	625.4	630.3
35°	557.5	566.2	584.7	606.0	611.8
37.5°	533.7	542.0	562.8	586.1	592.9
40°	507.5	517.7	541.5	566.2	573.0
42.5°	483.3	493.0	518.7	543.9	553.1
45°	454.2	467.7	494.4	522.1	531.8
47.5°	427.5	441.0	471.6	501.2	509.9
50°	400.8	415.3	447.4	477.9	486.7
52.5°	373.1	388.6	423.1	453.7	463.9
55°	344.0	362.0	397.9	428.9	438.1
57.5°	316.4	334.8	373.1	404.7	413.9
60°	289.2	308.1	347.4	377.5	387.2
62.5°	259.1	281.4	322.2	351.8	359.1
65°	231.9	254.7	294.5	324.1	332.4
67.5°	203.3	228.0	267.8	295.0	302.8
70°	176.1	201.8	240.2	265.4	268.8
72.5°	147.0	173.2	212.0	228.0	228.0
75°	120.8	147.5	183.4	186.3	183.9
77.5°	92.2	121.8	145.1	139.3	133.4
80°	66.5	95.6	106.3	95.6	87.8
82.5°	44.6	69.4	64.0	50.9	45.1
85°	24.7	36.9	25.2	14.1	10.2
87.5°	9.2	8.2	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)