

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: P312162

Luminaire Tested: **14FCZ2-20-UNV-L83050-CP250-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: P312162  
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: 14FCZ2-20-UNV-L83050-CP250-W2A-U-4000K  
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" POLYCARB 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

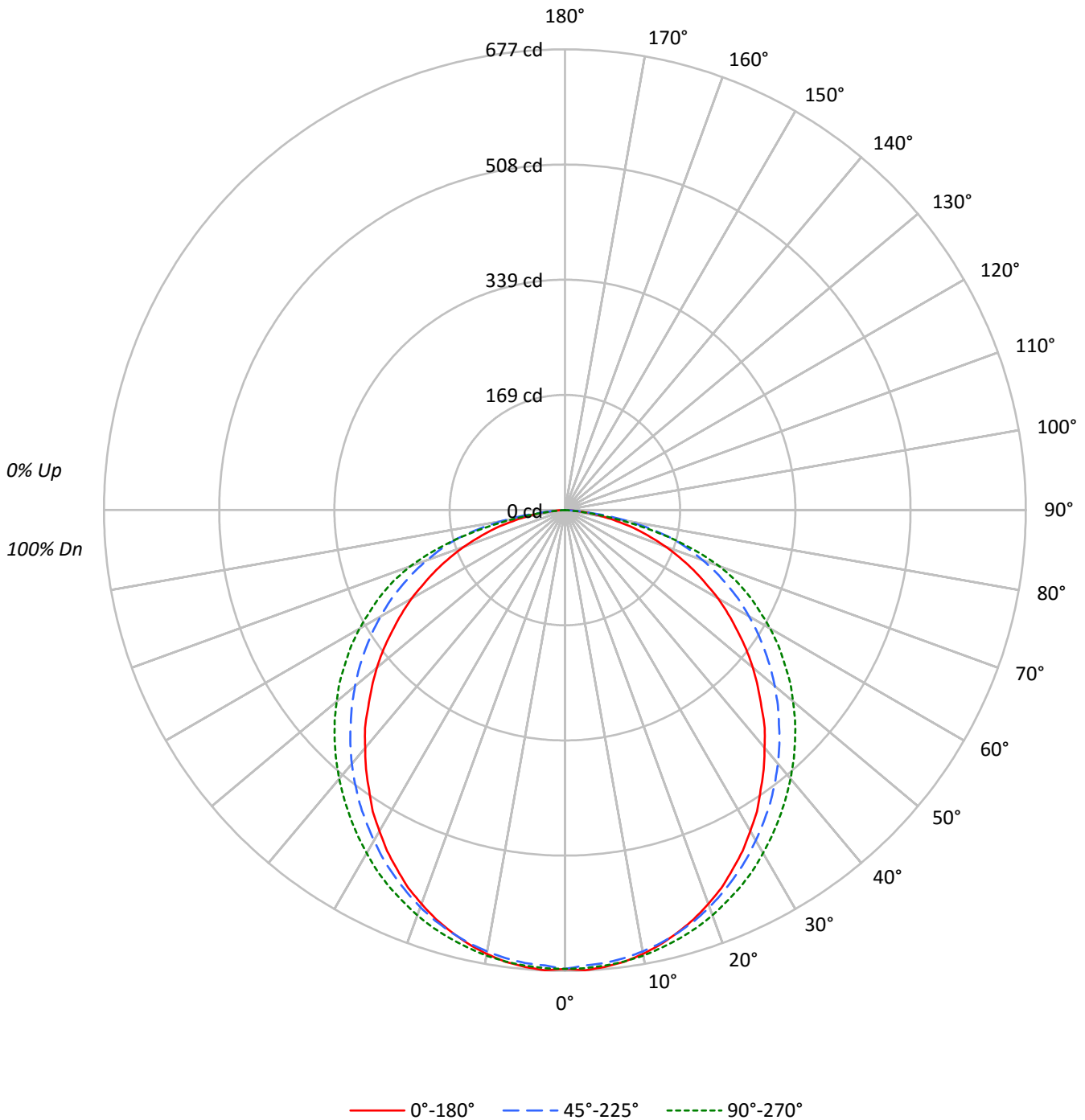
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1957.0 lumens  
Efficiency: N/A  
Efficacy: 115.8 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): 16.9  
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: P312162  
CATALOG NUMBER: 14FCZ2-20-UNV-L83050-CP250-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P312162

CATALOG NUMBER: 14FC22-20-UNV-L83050-CP250-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	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°	1814	1814	1814
5°	1820	1805	1815
10°	1809	1799	1816
15°	1789	1791	1815
20°	1763	1778	1814
25°	1730	1761	1813
30°	1692	1742	1809
35°	1647	1727	1808
40°	1603	1711	1811
45°	1554	1692	1820
50°	1509	1684	1832
55°	1452	1679	1848
60°	1400	1681	1874
65°	1328	1687	1903
70°	1246	1699	1902
75°	1130	1714	1720
80°	927	1481	1224
85°	689	701	284



TEST NUMBER: P312162

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-CP250-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.8	3.3
10°-20°	182.2	9.3
20°-30°	274.5	14.0
30°-40°	329.4	16.8
40°-50°	343.4	17.5
50°-60°	317.9	16.2
60°-70°	256.8	13.1
70°-80°	156.6	8.0
80°-90°	32.3	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°	520.6	26.6
0°-40°	850.0	43.4
0°-60°	1511.2	77.2
0°-90°	1957.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1957.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	674	674	674	674	674	
5°	674	672	668	673	672	64
15°	642	643	643	652	652	181
25°	583	586	593	608	610	269
35°	501	509	526	545	550	314
45°	408	421	445	470	478	316
55°	309	326	358	386	394	277
65°	209	229	265	292	299	206
75°	109	133	165	168	165	114
85°	22	33	23	13	9	27
90°	0	0	0	0	0	



TEST NUMBER: P312162

CATALOG NUMBER: 14FC22-20-UNV-L83050-CP250-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	674.2	674.2	674.2	674.2	674.2
2.5°	676.8	674.6	669.8	674.6	673.8
5°	673.8	672.0	668.1	672.9	672.0
7.5°	669.4	667.6	664.2	669.8	669.0
10°	662.0	661.1	658.5	665.0	664.6
12.5°	653.2	652.8	651.5	658.9	658.5
15°	642.3	642.8	642.8	651.5	651.5
17.5°	630.1	631.0	632.7	642.3	643.6
20°	615.7	617.5	621.0	631.9	633.6
22.5°	600.9	602.2	607.4	620.5	622.3
25°	582.6	586.0	593.0	607.9	610.5
27.5°	565.1	568.2	577.8	593.0	597.4
30°	544.6	549.4	560.7	577.3	582.1
32.5°	525.0	530.2	543.3	562.5	566.8
35°	501.4	509.2	525.8	545.0	550.3
37.5°	480.0	487.4	506.2	527.1	533.2
40°	456.4	465.6	487.0	509.2	515.4
42.5°	434.6	443.4	466.5	489.2	497.5
45°	408.4	420.7	444.7	469.5	478.3
47.5°	384.4	396.7	424.2	450.8	458.6
50°	360.4	373.5	402.3	429.8	437.7
52.5°	335.6	349.5	380.5	408.0	417.2
55°	309.4	325.5	357.8	385.8	394.0
57.5°	284.5	301.1	335.6	363.9	372.2
60°	260.1	277.1	312.4	339.5	348.2
62.5°	233.0	253.1	289.8	316.4	322.9
65°	208.6	229.1	264.9	291.5	298.9
67.5°	182.8	205.1	240.9	265.3	272.3
70°	158.4	181.5	216.0	238.7	241.7
72.5°	132.2	155.8	190.7	205.1	205.1
75°	108.7	132.7	164.9	167.6	165.4
77.5°	82.9	109.5	130.5	125.2	120.0
80°	59.8	86.0	95.6	86.0	79.0
82.5°	40.1	62.4	57.6	45.8	40.6
85°	22.3	33.2	22.7	12.7	9.2
87.5°	8.3	7.4	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)