

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: P311911

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-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: P311911
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-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1972.0 lumens
Efficiency: N/A
Efficacy: 82.9 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

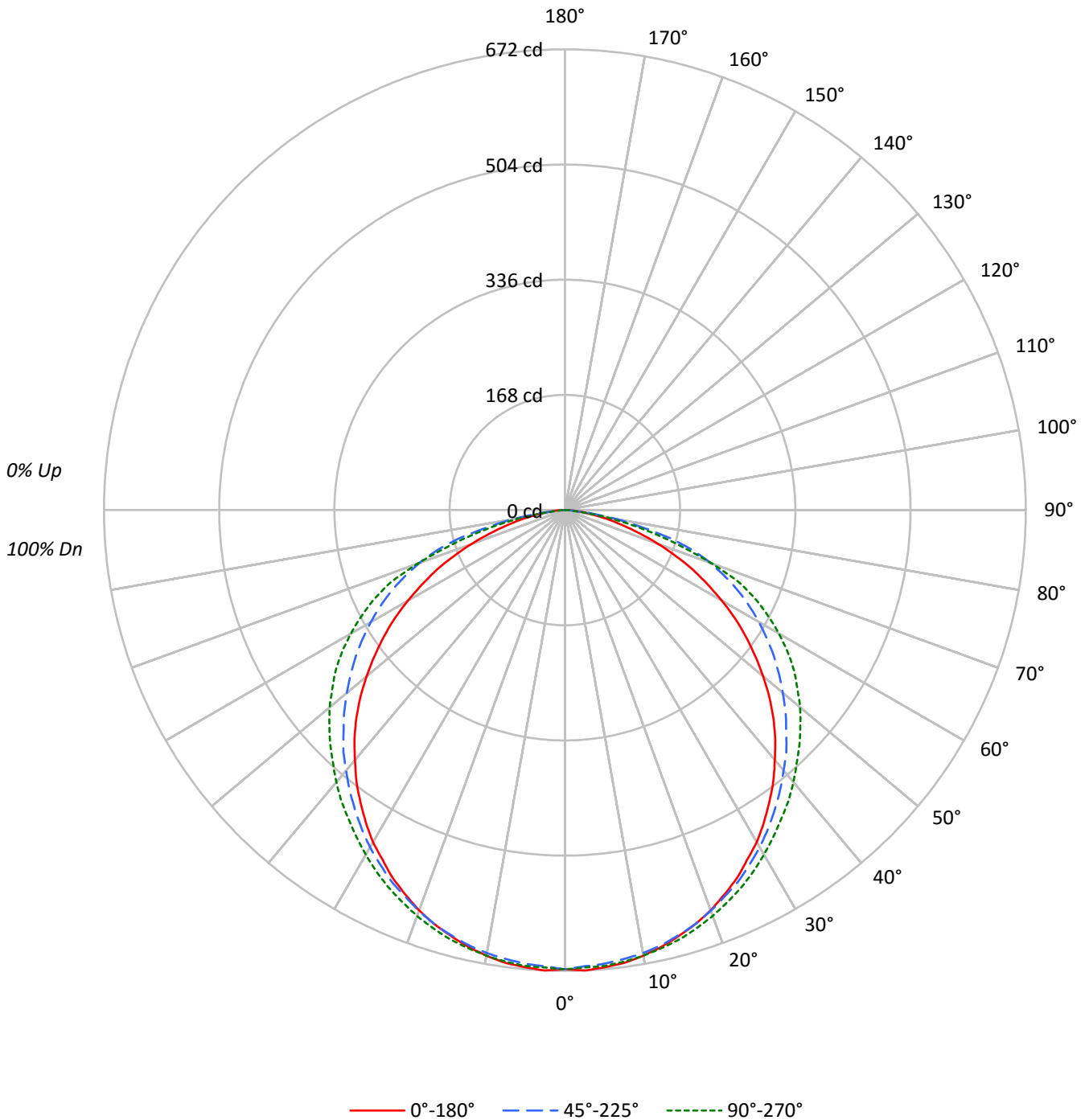
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1802	1802	1802
5°	1807	1794	1802
10°	1803	1793	1803
15°	1791	1788	1805
20°	1779	1781	1804
25°	1760	1775	1804
30°	1738	1765	1803
35°	1707	1752	1807
40°	1673	1743	1821
45°	1638	1737	1841
50°	1581	1737	1874
55°	1513	1746	1914
60°	1422	1759	1939
65°	1311	1777	1950
70°	1142	1781	1795
75°	941	1657	1450
80°	739	1192	970
85°	574	460	228



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	3.2
10°-20°	181.9	9.2
20°-30°	276.3	14.0
30°-40°	334.8	17.0
40°-50°	352.7	17.9
50°-60°	329.3	16.7
60°-70°	263.2	13.3
70°-80°	144.8	7.3
80°-90°	25.6	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°	521.6	26.5
0°-40°	856.4	43.4
0°-60°	1538.4	78.0
0°-90°	1972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	669	667	664	668	667	64
15°	643	643	642	648	648	181
25°	593	594	598	606	608	273
35°	520	525	533	547	550	325
45°	430	438	456	477	484	331
55°	322	339	372	398	408	288
65°	206	232	279	302	306	203
75°	90	130	159	143	140	97
85°	19	24	15	9	7	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	669.7	669.7	669.7	669.7	669.7
2.5°	672.2	670.3	666.0	669.7	667.8
5°	669.1	667.2	664.1	668.5	667.2
7.5°	666.0	663.5	660.4	665.4	664.1
10°	659.8	657.9	656.1	660.4	659.8
12.5°	652.3	651.7	649.9	654.8	654.2
15°	643.0	643.0	641.8	648.0	648.0
17.5°	633.1	632.5	633.1	639.9	639.3
20°	621.3	621.3	622.0	630.0	630.0
22.5°	607.1	607.7	609.6	619.5	618.9
25°	592.8	594.0	597.8	606.5	607.7
27.5°	575.4	578.5	582.9	593.4	594.7
30°	559.3	561.2	568.0	577.9	580.4
32.5°	540.1	543.8	551.3	562.4	565.5
35°	519.6	524.6	533.3	546.9	550.0
37.5°	499.2	503.5	515.3	529.6	535.1
40°	476.2	483.7	496.1	512.2	518.4
42.5°	453.9	461.3	478.1	494.8	500.4
45°	430.3	438.4	456.4	476.9	483.7
47.5°	404.3	413.6	436.5	458.2	465.7
50°	377.6	389.4	414.8	439.0	447.7
52.5°	349.7	364.6	393.8	419.2	427.2
55°	322.4	338.6	372.1	398.1	408.0
57.5°	294.5	311.9	349.7	379.5	385.1
60°	264.2	285.2	326.8	352.8	360.3
62.5°	234.4	258.6	303.2	328.0	334.2
65°	205.9	231.9	279.0	302.0	306.3
67.5°	174.9	205.9	252.4	273.5	274.7
70°	145.1	181.1	226.3	236.3	228.2
72.5°	116.0	154.4	195.9	187.9	181.1
75°	90.5	129.6	159.4	143.2	139.5
77.5°	67.0	106.0	114.1	105.4	98.6
80°	47.7	83.7	76.9	65.7	62.6
82.5°	32.9	52.7	42.2	32.9	28.5
85°	18.6	23.6	14.9	9.3	7.4
87.5°	8.1	5.6	3.1	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)