

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: P311890

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CA08-W2A-U-3000K**

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: P311890
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-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 2008.0 lumens
Efficiency: N/A
Efficacy: 84.4 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

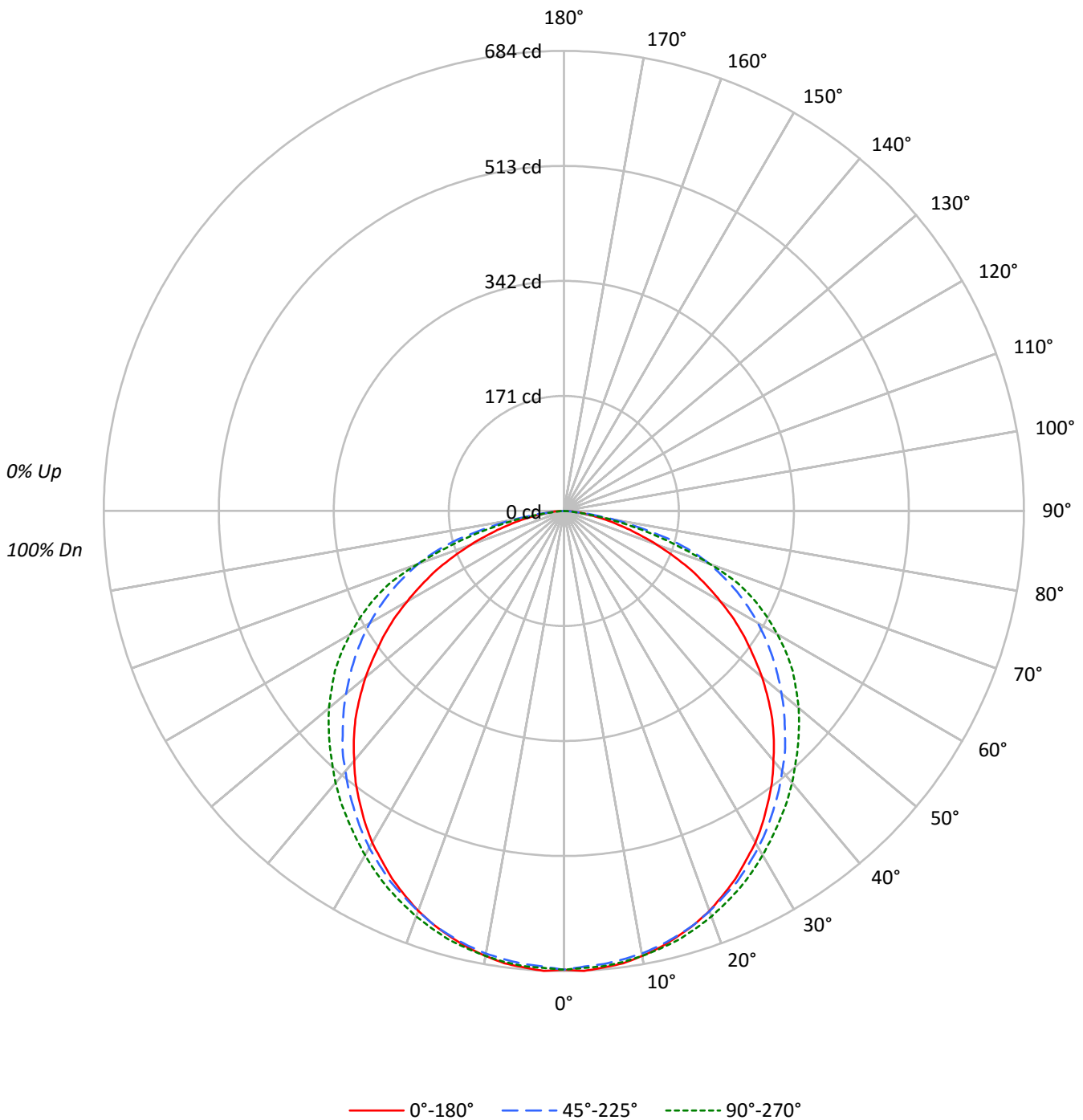
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1835	1835	1835
5°	1840	1827	1835
10°	1836	1825	1836
15°	1824	1821	1838
20°	1812	1814	1837
25°	1792	1807	1837
30°	1770	1797	1836
35°	1738	1784	1840
40°	1703	1774	1854
45°	1668	1768	1874
50°	1610	1768	1909
55°	1540	1777	1949
60°	1448	1791	1975
65°	1335	1809	1986
70°	1163	1814	1828
75°	959	1687	1477
80°	753	1213	989
85°	584	469	235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	3.2
10°-20°	185.2	9.2
20°-30°	281.3	14.0
30°-40°	340.9	17.0
40°-50°	359.2	17.9
50°-60°	335.3	16.7
60°-70°	268.0	13.3
70°-80°	147.5	7.3
80°-90°	26.0	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°	531.1	26.5
0°-40°	872.0	43.4
0°-60°	1566.5	78.0
0°-90°	2008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	682	682	682	682	682	
5°	681	679	676	681	679	65
15°	655	655	654	660	660	185
25°	604	605	609	618	619	278
35°	529	534	543	557	560	331
45°	438	446	465	486	492	337
55°	328	345	379	405	416	293
65°	210	236	284	308	312	206
75°	92	132	162	146	142	99
85°	19	24	15	10	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	681.9	681.9	681.9	681.9	681.9
2.5°	684.5	682.6	678.1	681.9	680.0
5°	681.3	679.4	676.2	680.7	679.4
7.5°	678.1	675.6	672.5	677.5	676.2
10°	671.8	669.9	668.0	672.5	671.8
12.5°	664.2	663.6	661.7	666.8	666.1
15°	654.8	654.8	653.5	659.8	659.8
17.5°	644.7	644.0	644.7	651.6	651.0
20°	632.7	632.7	633.3	641.5	641.5
22.5°	618.2	618.8	620.7	630.8	630.2
25°	603.6	604.9	608.7	617.5	618.8
27.5°	586.0	589.1	593.5	604.3	605.5
30°	569.5	571.4	578.4	588.5	591.0
32.5°	550.0	553.7	561.3	572.7	575.8
35°	529.1	534.2	543.0	556.9	560.1
37.5°	508.3	512.7	524.7	539.2	544.9
40°	484.9	492.5	505.1	521.5	527.9
42.5°	462.2	469.8	486.8	503.9	509.6
45°	438.2	446.4	464.7	485.6	492.5
47.5°	411.7	421.2	444.5	466.6	474.2
50°	384.5	396.5	422.4	447.0	455.9
52.5°	356.1	371.3	400.9	426.8	435.0
55°	328.3	344.8	378.8	405.4	415.5
57.5°	299.9	317.6	356.1	386.4	392.1
60°	269.0	290.5	332.8	359.3	366.9
62.5°	238.7	263.3	308.8	334.0	340.3
65°	209.6	236.1	284.1	307.5	311.9
67.5°	178.1	209.6	257.0	278.5	279.7
70°	147.8	184.4	230.5	240.6	232.4
72.5°	118.1	157.2	199.5	191.3	184.4
75°	92.2	132.0	162.3	145.9	142.1
77.5°	68.2	108.0	116.2	107.3	100.4
80°	48.6	85.2	78.3	66.9	63.8
82.5°	33.5	53.7	42.9	33.5	29.0
85°	18.9	24.0	15.2	9.5	7.6
87.5°	8.2	5.7	3.2	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)