

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: P311943

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CA08-W2A-U-4500K**

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: P311943
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: 14FCZ2-39-UNV-L83050-HRP-CA08-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2989.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

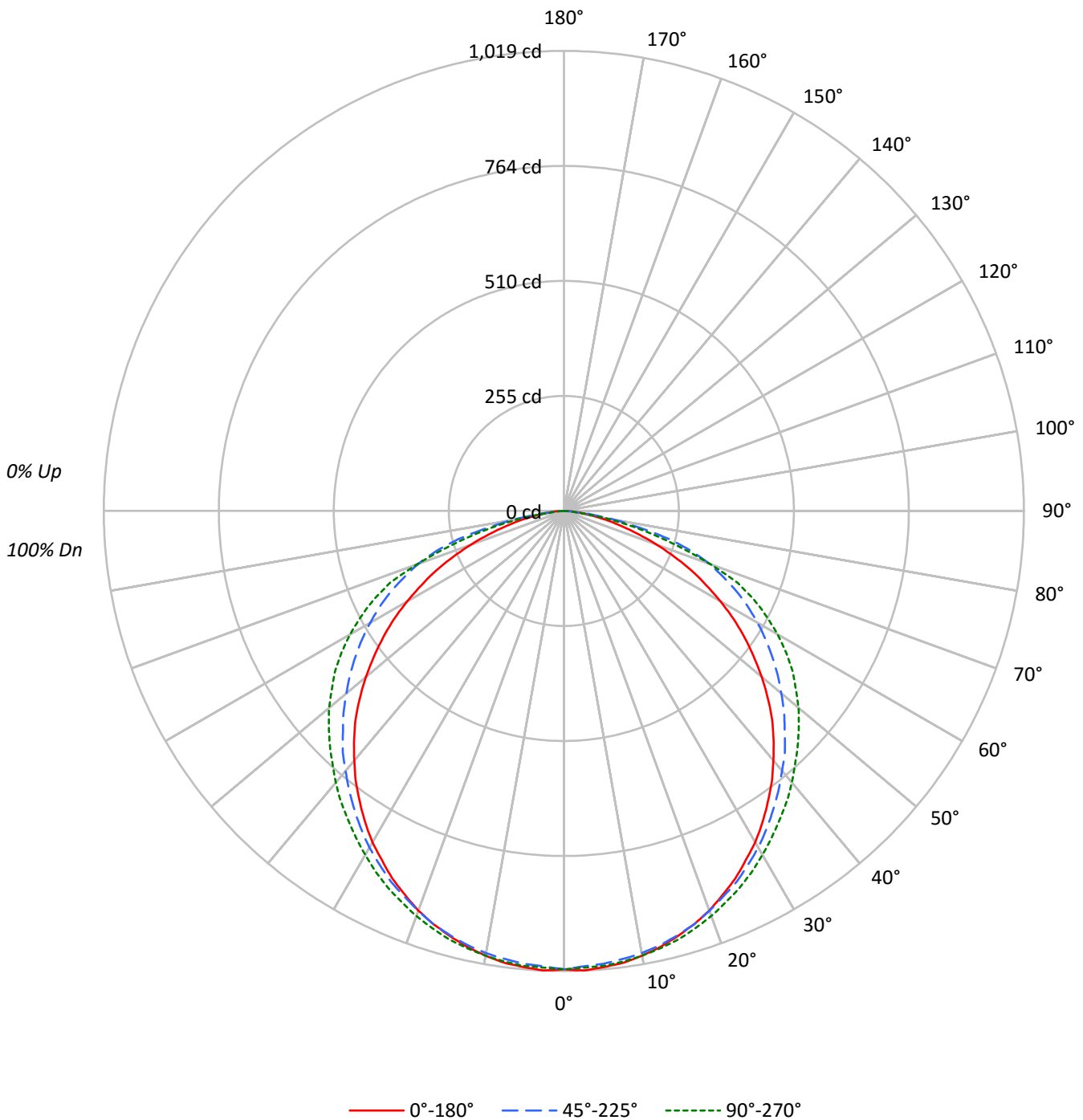
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2732	2732	2732
5°	2739	2719	2732
10°	2732	2717	2732
15°	2715	2710	2736
20°	2697	2700	2735
25°	2668	2690	2735
30°	2634	2675	2733
35°	2587	2655	2739
40°	2536	2641	2760
45°	2482	2633	2790
50°	2396	2632	2841
55°	2293	2646	2901
60°	2155	2666	2939
65°	1987	2693	2956
70°	1730	2699	2722
75°	1426	2512	2199
80°	1122	1805	1471
85°	871	698	349



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.1	3.2
10°-20°	275.8	9.2
20°-30°	418.8	14.0
30°-40°	507.4	17.0
40°-50°	534.7	17.9
50°-60°	499.2	16.7
60°-70°	398.9	13.3
70°-80°	219.5	7.3
80°-90°	38.8	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°	790.6	26.5
0°-40°	1298.0	43.4
0°-60°	2331.8	78.0
0°-90°	2989.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2989.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1015	1015	1015	1015	1015	
5°	1014	1011	1007	1013	1011	96
15°	975	975	973	982	982	275
25°	898	900	906	919	921	414
35°	788	795	808	829	834	493
45°	652	664	692	723	733	502
55°	489	513	564	603	618	436
65°	312	352	423	458	464	307
75°	137	196	242	217	212	148
85°	28	36	23	14	11	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1015.1	1015.1	1015.1	1015.1	1015.1
2.5°	1018.8	1016.0	1009.4	1015.1	1012.3
5°	1014.1	1011.3	1006.6	1013.2	1011.3
7.5°	1009.4	1005.7	1001.0	1008.5	1006.6
10°	1000.0	997.2	994.4	1001.0	1000.0
12.5°	988.8	987.8	985.0	992.5	991.6
15°	974.7	974.7	972.8	982.2	982.2
17.5°	959.6	958.7	959.6	970.0	969.0
20°	941.8	941.8	942.7	954.9	954.9
22.5°	920.2	921.1	923.9	938.9	938.0
25°	898.5	900.4	906.1	919.2	921.1
27.5°	872.2	876.9	883.5	899.5	901.4
30°	847.8	850.6	860.9	876.0	879.7
32.5°	818.6	824.3	835.6	852.5	857.2
35°	787.6	795.1	808.3	829.0	833.7
37.5°	756.6	763.2	781.0	802.7	811.1
40°	721.8	733.1	751.9	776.3	785.7
42.5°	688.0	699.3	724.7	750.0	758.5
45°	652.3	664.5	691.8	722.8	733.1
47.5°	612.8	626.9	661.7	694.6	705.9
50°	572.4	590.2	628.8	665.4	678.6
52.5°	530.1	552.7	596.8	635.4	647.6
55°	488.7	513.2	563.9	603.4	618.4
57.5°	446.4	472.8	530.1	575.2	583.7
60°	400.4	432.3	495.3	534.8	546.1
62.5°	355.3	391.9	459.6	497.2	506.6
65°	312.0	351.5	422.9	457.7	464.3
67.5°	265.0	312.0	382.5	414.5	416.4
70°	219.9	274.4	343.1	358.1	345.9
72.5°	175.8	234.0	297.0	284.8	274.4
75°	137.2	196.4	241.6	217.1	211.5
77.5°	101.5	160.7	172.9	159.8	149.4
80°	72.4	126.9	116.5	99.6	94.9
82.5°	49.8	79.9	63.9	49.8	43.2
85°	28.2	35.7	22.6	14.1	11.3
87.5°	12.2	8.5	4.7	3.8	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)