

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: P311941

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CA08-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: P311941
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-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2820.0 lumens
Efficiency: N/A
Efficacy: 84.7 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

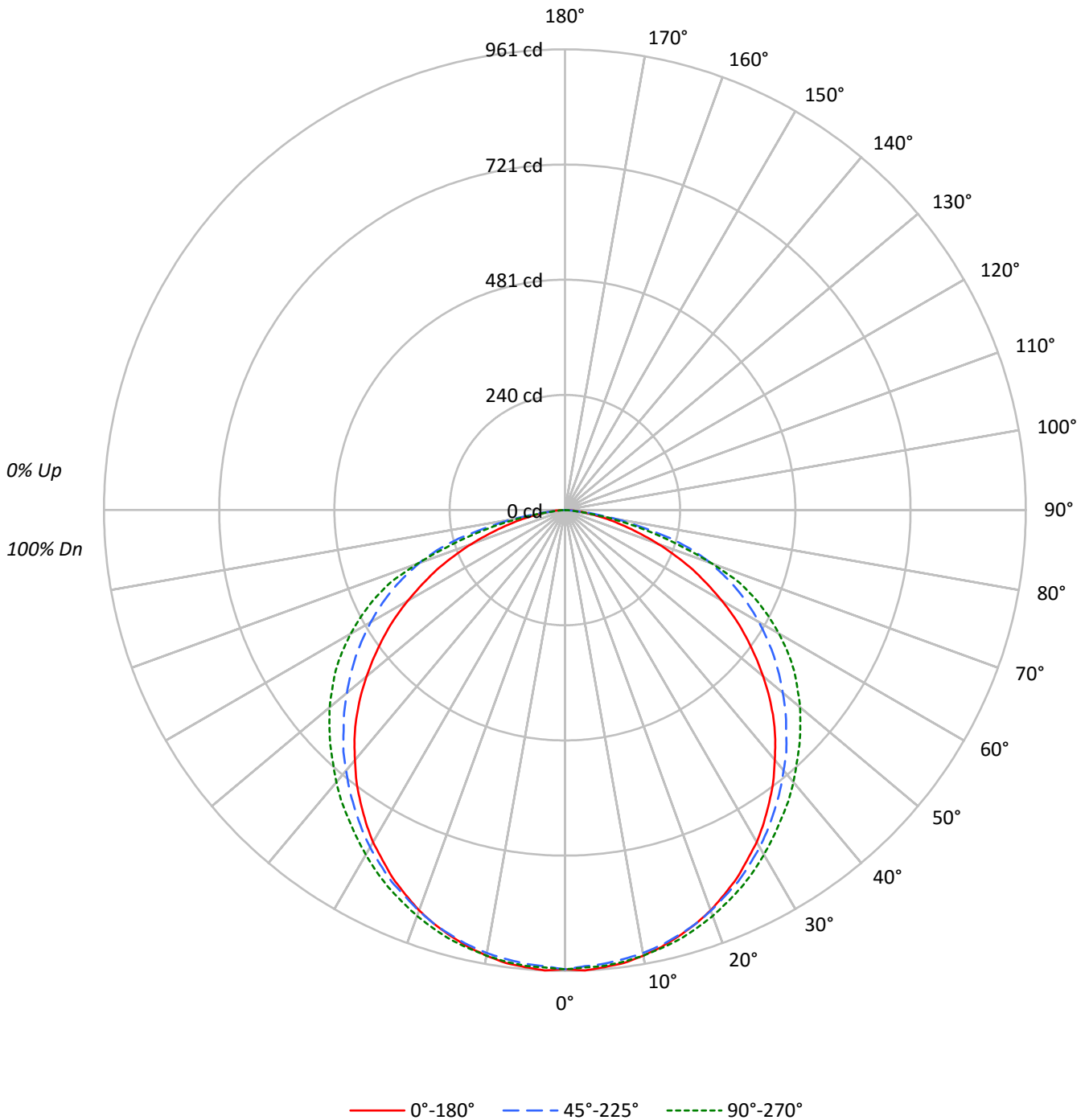
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2577	2577	2577
5°	2585	2565	2577
10°	2578	2564	2578
15°	2562	2557	2582
20°	2544	2547	2580
25°	2517	2538	2580
30°	2485	2524	2579
35°	2441	2505	2584
40°	2392	2492	2604
45°	2342	2484	2632
50°	2261	2483	2680
55°	2163	2496	2738
60°	2033	2515	2773
65°	1875	2541	2790
70°	1633	2547	2567
75°	1346	2370	2074
80°	1058	1705	1389
85°	821	658	327



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	3.2
10°-20°	260.2	9.2
20°-30°	395.1	14.0
30°-40°	478.7	17.0
40°-50°	504.4	17.9
50°-60°	470.9	16.7
60°-70°	376.3	13.3
70°-80°	207.1	7.3
80°-90°	36.6	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°	745.9	26.5
0°-40°	1224.6	43.4
0°-60°	2200.0	78.0
0°-90°	2820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	957	954	950	956	954	91
15°	920	920	918	927	927	260
25°	848	850	855	867	869	390
35°	743	750	763	782	786	465
45°	615	627	653	682	692	473
55°	461	484	532	569	584	412
65°	294	332	399	432	438	290
75°	130	185	228	205	200	139
85°	27	34	21	13	11	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	957.7	957.7	957.7	957.7	957.7
2.5°	961.2	958.6	952.4	957.7	955.0
5°	956.8	954.1	949.7	955.9	954.1
7.5°	952.4	948.8	944.4	951.5	949.7
10°	943.5	940.8	938.2	944.4	943.5
12.5°	932.9	932.0	929.3	936.4	935.5
15°	919.6	919.6	917.8	926.7	926.7
17.5°	905.4	904.5	905.4	915.1	914.2
20°	888.5	888.5	889.4	900.9	900.9
22.5°	868.1	869.0	871.7	885.9	885.0
25°	847.7	849.5	854.8	867.2	869.0
27.5°	822.9	827.3	833.5	848.6	850.4
30°	799.8	802.5	812.3	826.4	830.0
32.5°	772.4	777.7	788.3	804.3	808.7
35°	743.1	750.2	762.6	782.1	786.5
37.5°	713.8	720.0	736.9	757.3	765.3
40°	681.0	691.7	709.4	732.5	741.3
42.5°	649.1	659.7	683.7	707.6	715.6
45°	615.4	626.9	652.6	681.9	691.7
47.5°	578.2	591.5	624.3	655.3	665.9
50°	540.0	556.9	593.2	627.8	640.2
52.5°	500.1	521.4	563.1	599.4	611.0
55°	461.1	484.2	532.0	569.3	583.5
57.5°	421.2	446.0	500.1	542.7	550.7
60°	377.8	407.9	467.3	504.6	515.2
62.5°	335.2	369.8	433.6	469.1	478.0
65°	294.4	331.6	399.0	431.8	438.1
67.5°	250.1	294.4	360.9	391.1	392.8
70°	207.5	258.9	323.7	337.9	326.3
72.5°	165.8	220.8	280.2	268.7	258.9
75°	129.5	185.3	227.9	204.8	199.5
77.5°	95.8	151.6	163.2	150.7	141.0
80°	68.3	119.7	110.0	94.0	89.6
82.5°	47.0	75.4	60.3	47.0	40.8
85°	26.6	33.7	21.3	13.3	10.6
87.5°	11.5	8.0	4.4	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)