

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: P311981

Luminaire Tested: **14FCZ2-44-UNV-L83050-HRP-CP187-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: P311981
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: 14FCZ2-44-UNV-L83050-HRP-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 2950.0 lumens
Efficiency: N/A
Efficacy: 77.0 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

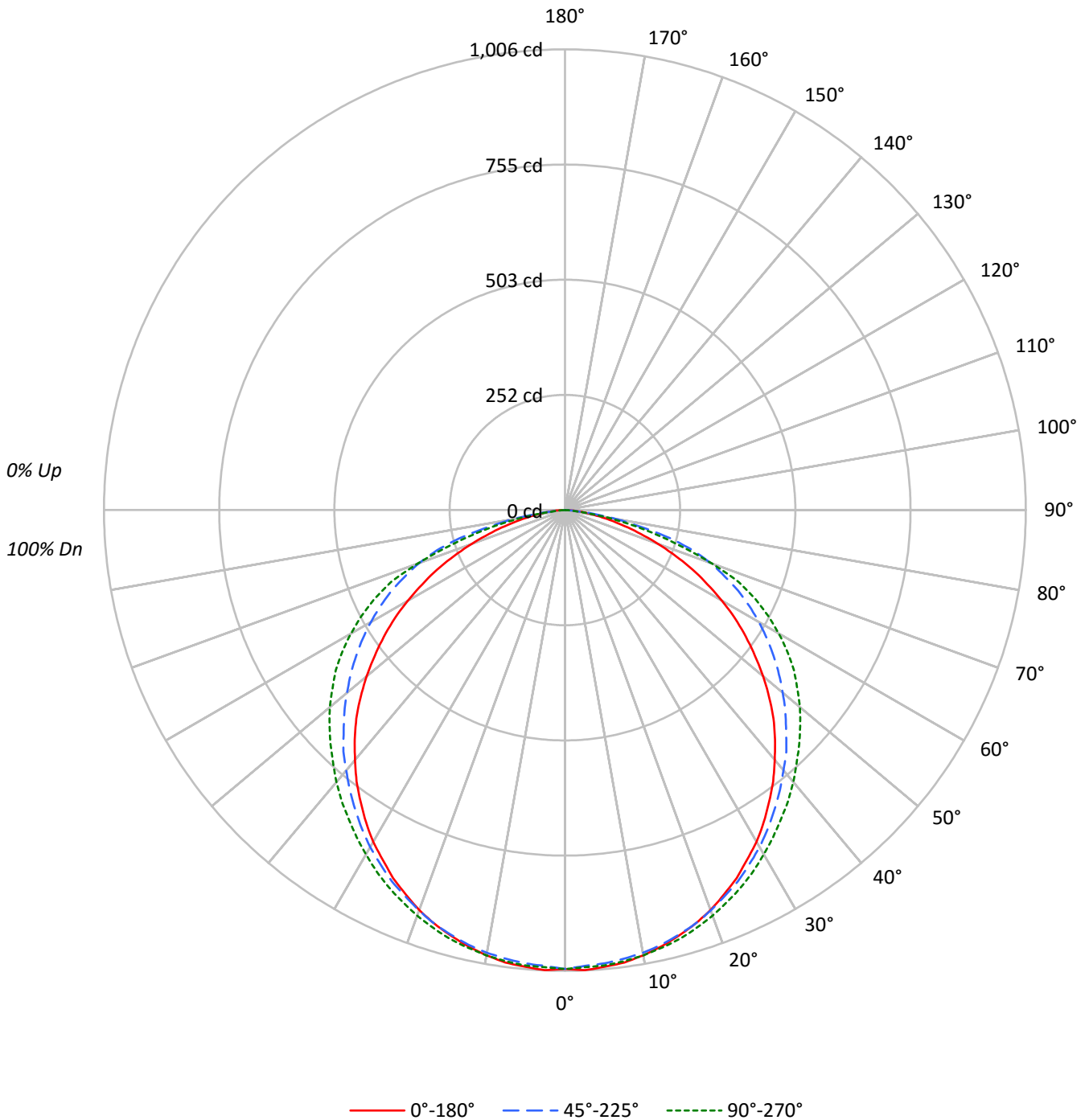
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2696	2696	2696
5°	2704	2684	2696
10°	2697	2682	2697
15°	2680	2675	2701
20°	2662	2664	2699
25°	2633	2655	2699
30°	2600	2640	2698
35°	2553	2621	2703
40°	2503	2607	2724
45°	2450	2598	2753
50°	2365	2598	2804
55°	2263	2611	2864
60°	2127	2631	2901
65°	1961	2658	2918
70°	1708	2664	2686
75°	1408	2479	2170
80°	1106	1782	1452
85°	858	689	343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	3.2
10°-20°	272.2	9.2
20°-30°	413.3	14.0
30°-40°	500.8	17.0
40°-50°	527.7	17.9
50°-60°	492.6	16.7
60°-70°	393.7	13.3
70°-80°	216.6	7.3
80°-90°	38.2	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°	780.3	26.5
0°-40°	1281.1	43.4
0°-60°	2301.4	78.0
0°-90°	2950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	1001	998	994	1000	998	95
15°	962	962	960	969	969	272
25°	887	889	894	907	909	408
35°	777	785	798	818	823	486
45°	644	656	683	713	724	495
55°	482	506	557	596	610	431
65°	308	347	417	452	458	303
75°	135	194	238	214	209	146
85°	28	35	22	14	11	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1001.8	1001.8	1001.8	1001.8	1001.8
2.5°	1005.5	1002.8	996.3	1001.8	999.1
5°	1000.9	998.1	993.5	1000.0	998.1
7.5°	996.3	992.6	987.9	995.3	993.5
10°	987.0	984.2	981.4	987.9	987.0
12.5°	975.9	974.9	972.2	979.6	978.6
15°	961.9	961.9	960.1	969.4	969.4
17.5°	947.1	946.2	947.1	957.3	956.4
20°	929.5	929.5	930.4	942.5	942.5
22.5°	908.1	909.1	911.9	926.7	925.8
25°	886.8	888.7	894.2	907.2	909.1
27.5°	860.8	865.5	872.0	887.7	889.6
30°	836.7	839.5	849.7	864.5	868.3
32.5°	808.0	813.5	824.7	841.4	846.0
35°	777.3	784.8	797.8	818.2	822.8
37.5°	746.7	753.2	770.9	792.2	800.5
40°	712.4	723.5	742.1	766.2	775.5
42.5°	679.0	690.2	715.2	740.2	748.6
45°	643.8	655.8	682.7	713.3	723.5
47.5°	604.8	618.7	653.0	685.5	696.6
50°	564.9	582.5	620.6	656.8	669.7
52.5°	523.2	545.4	589.0	627.1	639.1
55°	482.4	506.5	556.6	595.5	610.4
57.5°	440.6	466.6	523.2	567.7	576.1
60°	395.2	426.7	488.9	527.8	539.0
62.5°	350.6	386.8	453.6	490.7	500.0
65°	308.0	346.9	417.4	451.8	458.2
67.5°	261.6	308.0	377.5	409.1	410.9
70°	217.1	270.9	338.6	353.4	341.4
72.5°	173.5	231.0	293.1	281.1	270.9
75°	135.4	193.9	238.4	214.3	208.7
77.5°	100.2	158.6	170.7	157.7	147.5
80°	71.4	125.2	115.0	98.3	93.7
82.5°	49.2	78.8	63.1	49.2	42.7
85°	27.8	35.2	22.3	13.9	11.1
87.5°	12.1	8.3	4.6	3.7	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)