

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: P311958

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CP187-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: P311958
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-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB 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: 2797.0 lumens
Efficiency: N/A
Efficacy: 80.1 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

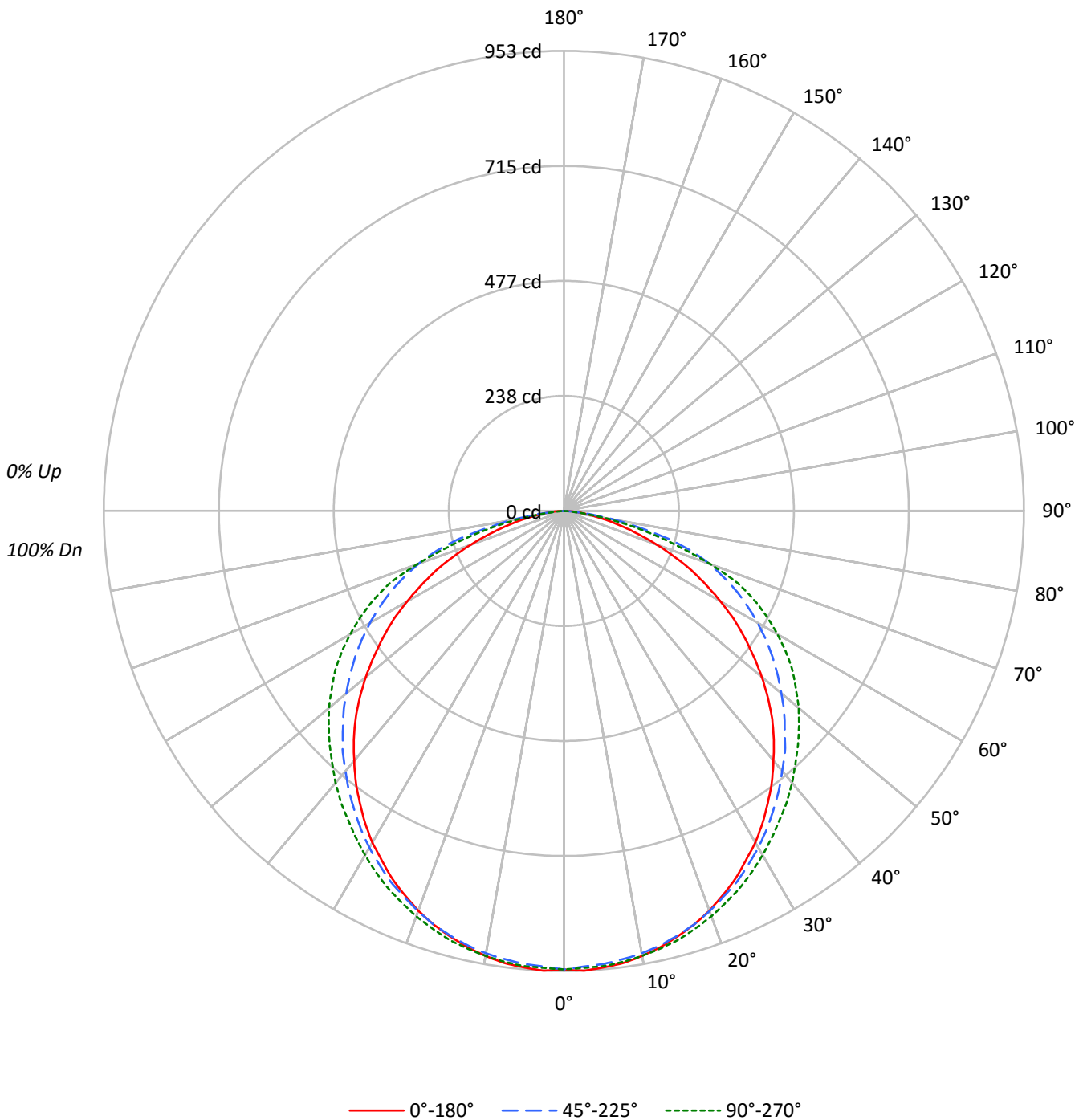
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2556	2556	2556
5°	2563	2545	2556
10°	2557	2543	2557
15°	2541	2536	2561
20°	2524	2526	2559
25°	2496	2518	2559
30°	2465	2503	2558
35°	2421	2485	2563
40°	2373	2472	2583
45°	2323	2463	2611
50°	2242	2463	2658
55°	2145	2476	2715
60°	2017	2495	2750
65°	1859	2520	2767
70°	1619	2526	2547
75°	1335	2350	2058
80°	1049	1691	1376
85°	815	651	327



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	3.2
10°-20°	258.0	9.2
20°-30°	391.9	14.0
30°-40°	474.8	17.0
40°-50°	500.3	17.9
50°-60°	467.1	16.7
60°-70°	373.3	13.3
70°-80°	205.4	7.3
80°-90°	36.3	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°	739.8	26.5
0°-40°	1214.6	43.4
0°-60°	2182.1	78.0
0°-90°	2797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2797.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	949	946	942	948	946	90
15°	912	912	910	919	919	257
25°	841	843	848	860	862	387
35°	737	744	756	776	780	461
45°	610	622	647	676	686	470
55°	457	480	528	565	579	408
65°	292	329	396	428	434	287
75°	128	184	226	203	198	138
85°	26	33	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°	949.9	949.9	949.9	949.9	949.9
2.5°	953.4	950.8	944.6	949.9	947.2
5°	949.0	946.4	942.0	948.1	946.4
7.5°	944.6	941.1	936.7	943.7	942.0
10°	935.8	933.2	930.5	936.7	935.8
12.5°	925.2	924.4	921.7	928.8	927.9
15°	912.1	912.1	910.3	919.1	919.1
17.5°	898.0	897.1	898.0	907.7	906.8
20°	881.3	881.3	882.2	893.6	893.6
22.5°	861.0	861.9	864.6	878.6	877.8
25°	840.8	842.6	847.9	860.2	861.9
27.5°	816.2	820.6	826.7	841.7	843.5
30°	793.3	796.0	805.6	819.7	823.2
32.5°	766.1	771.3	781.9	797.7	802.1
35°	737.0	744.1	756.4	775.7	780.1
37.5°	708.0	714.2	730.9	751.1	759.0
40°	675.5	686.0	703.6	726.5	735.3
42.5°	643.8	654.4	678.1	701.9	709.8
45°	610.4	621.8	647.3	676.3	686.0
47.5°	573.4	586.6	619.2	650.0	660.5
50°	535.6	552.3	588.4	622.7	635.0
52.5°	496.0	517.2	558.5	594.6	606.0
55°	457.3	480.2	527.7	564.6	578.7
57.5°	417.8	442.4	496.0	538.3	546.2
60°	374.7	404.6	463.5	500.4	511.0
62.5°	332.5	366.8	430.1	465.3	474.1
65°	292.0	328.9	395.8	428.3	434.5
67.5°	248.0	292.0	358.0	387.9	389.6
70°	205.8	256.8	321.0	335.1	323.7
72.5°	164.5	219.0	277.9	266.5	256.8
75°	128.4	183.8	226.0	203.2	197.9
77.5°	95.0	150.4	161.8	149.5	139.8
80°	67.7	118.7	109.1	93.2	88.8
82.5°	46.6	74.8	59.8	46.6	40.5
85°	26.4	33.4	21.1	13.2	10.6
87.5°	11.4	7.9	4.4	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)