

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: P311962

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CP250-W2A-U-4000K**

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: P311962
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-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 2748.0 lumens
Efficiency: N/A
Efficacy: 80.6 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

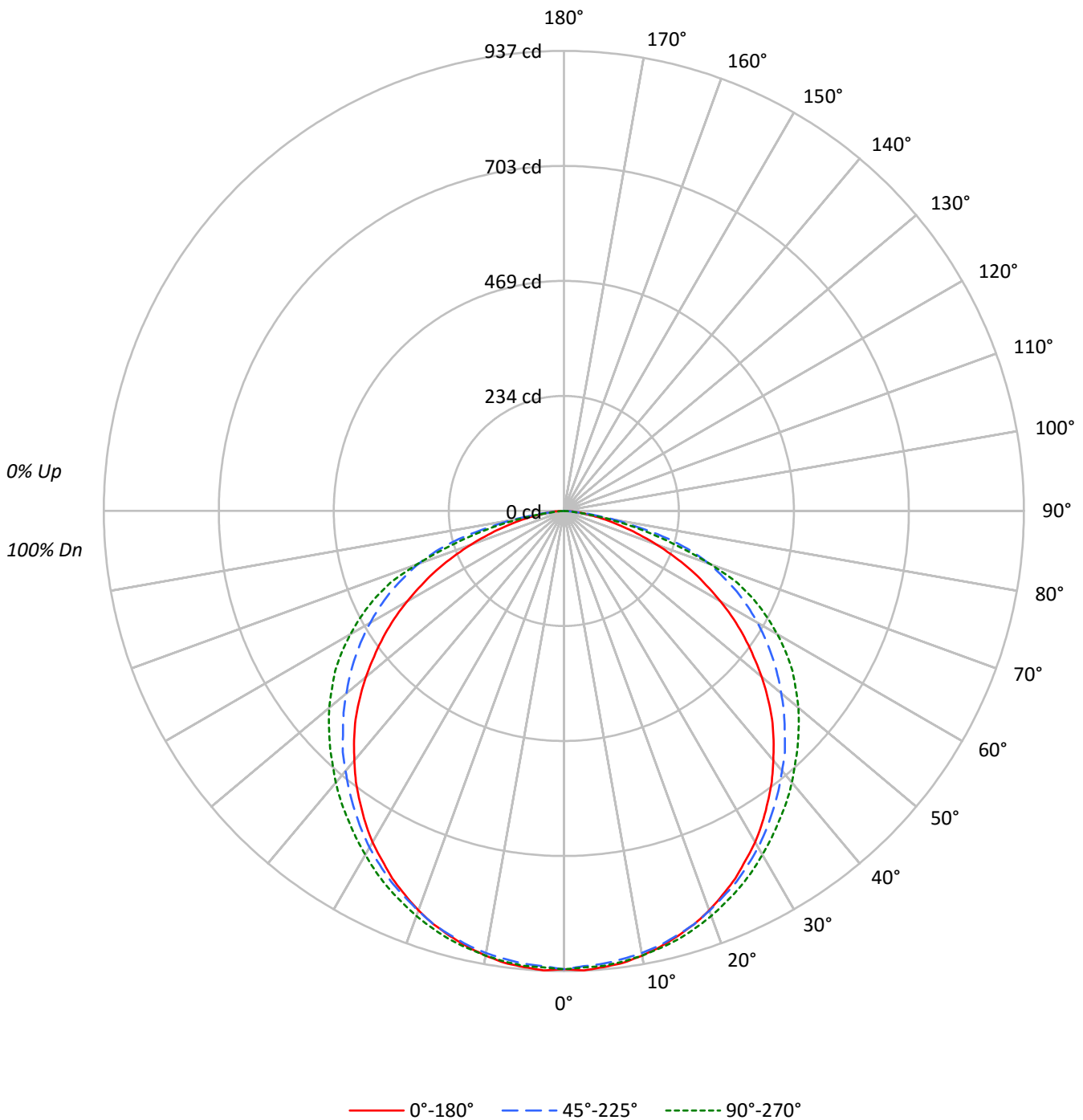
Input Watts (W): 34.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2511	2511	2511
5°	2519	2500	2512
10°	2512	2498	2512
15°	2496	2491	2516
20°	2479	2482	2514
25°	2453	2473	2514
30°	2422	2459	2513
35°	2379	2441	2518
40°	2331	2428	2538
45°	2282	2420	2565
50°	2203	2420	2612
55°	2108	2433	2668
60°	1981	2451	2702
65°	1827	2476	2718
70°	1591	2482	2502
75°	1312	2309	2021
80°	1031	1660	1353
85°	800	639	321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.4	3.2
10°-20°	253.5	9.2
20°-30°	385.0	14.0
30°-40°	466.5	17.0
40°-50°	491.6	17.9
50°-60°	458.9	16.7
60°-70°	366.7	13.3
70°-80°	201.8	7.3
80°-90°	35.6	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°	726.9	26.5
0°-40°	1193.3	43.4
0°-60°	2143.8	78.0
0°-90°	2748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2748.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	933	933	933	933	933	
5°	932	930	926	932	930	89
15°	896	896	894	903	903	253
25°	826	828	833	845	847	380
35°	724	731	743	762	766	453
45°	600	611	636	664	674	461
55°	449	472	518	555	569	401
65°	287	323	389	421	427	282
75°	126	181	222	200	194	136
85°	26	33	21	13	10	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	933.2	933.2	933.2	933.2	933.2
2.5°	936.7	934.1	928.1	933.2	930.6
5°	932.4	929.8	925.5	931.5	929.8
7.5°	928.1	924.6	920.3	927.2	925.5
10°	919.4	916.8	914.2	920.3	919.4
12.5°	909.0	908.2	905.6	912.5	911.6
15°	896.1	896.1	894.3	903.0	903.0
17.5°	882.3	881.4	882.3	891.8	890.9
20°	865.8	865.8	866.7	877.9	877.9
22.5°	846.0	846.8	849.4	863.2	862.4
25°	826.1	827.8	833.0	845.1	846.8
27.5°	801.9	806.2	812.3	826.9	828.7
30°	779.4	782.0	791.5	805.3	808.8
32.5°	752.6	757.8	768.2	783.7	788.1
35°	724.1	731.0	743.1	762.1	766.5
37.5°	695.6	701.7	718.1	737.9	745.7
40°	663.6	674.0	691.3	713.8	722.4
42.5°	632.5	642.9	666.2	689.6	697.3
45°	599.7	610.9	636.0	664.5	674.0
47.5°	563.4	576.4	608.3	638.6	648.9
50°	526.2	542.7	578.1	611.8	623.9
52.5°	487.4	508.1	548.7	584.1	595.4
55°	449.3	471.8	518.5	554.8	568.6
57.5°	410.5	434.6	487.4	528.8	536.6
60°	368.1	397.5	455.4	491.7	502.0
62.5°	326.6	360.3	422.5	457.1	465.8
65°	286.9	323.2	388.8	420.8	426.9
67.5°	243.7	286.9	351.7	381.1	382.8
70°	202.2	252.3	315.4	329.2	318.0
72.5°	161.6	215.2	273.1	261.8	252.3
75°	126.2	180.6	222.1	199.6	194.4
77.5°	93.3	147.8	159.0	146.9	137.4
80°	66.5	116.7	107.1	91.6	87.3
82.5°	45.8	73.4	58.8	45.8	39.7
85°	25.9	32.8	20.7	13.0	10.4
87.5°	11.2	7.8	4.3	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)