

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: P311988

Luminaire Tested: **14FCZ2-44-UNV-L83050-HRP-CP250-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: P311988
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-CP250-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 3101.0 lumens
Efficiency: N/A
Efficacy: 77.1 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

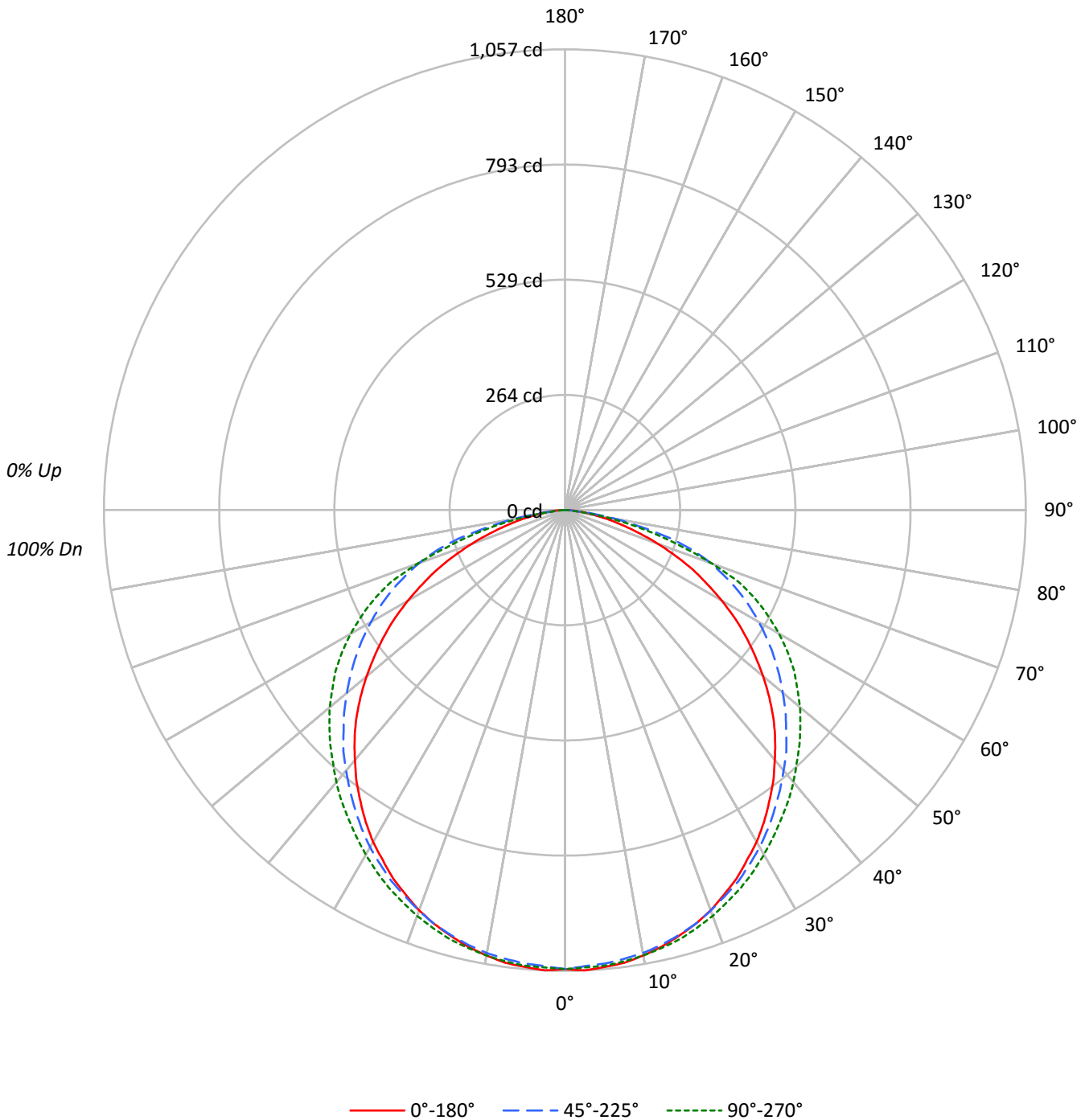
Input Watts (W): 40.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2834	2834	2834
5°	2842	2821	2834
10°	2835	2819	2835
15°	2817	2812	2839
20°	2798	2801	2837
25°	2768	2791	2837
30°	2733	2775	2836
35°	2684	2755	2841
40°	2631	2740	2864
45°	2575	2731	2895
50°	2486	2731	2947
55°	2379	2745	3010
60°	2236	2766	3049
65°	2061	2794	3067
70°	1795	2800	2823
75°	1481	2606	2281
80°	1164	1874	1526
85°	905	722	361



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.7	3.2
10°-20°	286.1	9.2
20°-30°	434.5	14.0
30°-40°	526.4	17.0
40°-50°	554.7	17.9
50°-60°	517.9	16.7
60°-70°	413.8	13.3
70°-80°	227.7	7.3
80°-90°	40.2	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°	820.2	26.5
0°-40°	1346.6	43.4
0°-60°	2419.2	78.0
0°-90°	3101.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3101.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1052	1049	1044	1051	1049	100
15°	1011	1011	1009	1019	1019	285
25°	932	934	940	954	956	429
35°	817	825	839	860	865	511
45°	677	689	718	750	761	521
55°	507	532	585	626	642	453
65°	324	365	439	475	482	319
75°	142	204	251	225	219	153
85°	29	37	23	15	12	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1053.1	1053.1	1053.1	1053.1	1053.1
2.5°	1057.0	1054.1	1047.3	1053.1	1050.2
5°	1052.1	1049.2	1044.3	1051.2	1049.2
7.5°	1047.3	1043.4	1038.5	1046.3	1044.3
10°	1037.5	1034.6	1031.7	1038.5	1037.5
12.5°	1025.8	1024.8	1021.9	1029.7	1028.7
15°	1011.2	1011.2	1009.2	1019.0	1019.0
17.5°	995.6	994.6	995.6	1006.3	1005.3
20°	977.1	977.1	978.0	990.7	990.7
22.5°	954.6	955.6	958.5	974.1	973.2
25°	932.2	934.2	940.0	953.7	955.6
27.5°	904.9	909.8	916.6	933.2	935.1
30°	879.5	882.5	893.2	908.8	912.7
32.5°	849.3	855.2	866.9	884.4	889.3
35°	817.1	824.9	838.6	860.0	864.9
37.5°	785.0	791.8	810.3	832.7	841.5
40°	748.9	760.6	780.1	805.4	815.2
42.5°	713.8	725.5	751.8	778.1	786.9
45°	676.7	689.4	717.7	749.9	760.6
47.5°	635.8	650.4	686.5	720.6	732.3
50°	593.8	612.4	652.3	690.4	704.0
52.5°	550.0	573.4	619.2	659.2	671.8
55°	507.1	532.4	585.1	626.0	641.6
57.5°	463.2	490.5	550.0	596.8	605.5
60°	415.4	448.5	513.9	554.8	566.5
62.5°	368.6	406.6	476.8	515.8	525.6
65°	323.7	364.7	438.8	474.9	481.7
67.5°	275.0	323.7	396.9	430.0	432.0
70°	228.2	284.7	355.9	371.5	358.8
72.5°	182.3	242.8	308.1	295.5	284.7
75°	142.4	203.8	250.6	225.2	219.4
77.5°	105.3	166.7	179.4	165.8	155.0
80°	75.1	131.6	120.9	103.4	98.5
82.5°	51.7	82.9	66.3	51.7	44.9
85°	29.3	37.1	23.4	14.6	11.7
87.5°	12.7	8.8	4.9	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)