

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: P311936

Luminaire Tested: **14FCZ2-35-UNV-L83050-HRP-CP250-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: P311936
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: 14FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 2372.0 lumens
Efficiency: N/A
Efficacy: 80.4 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

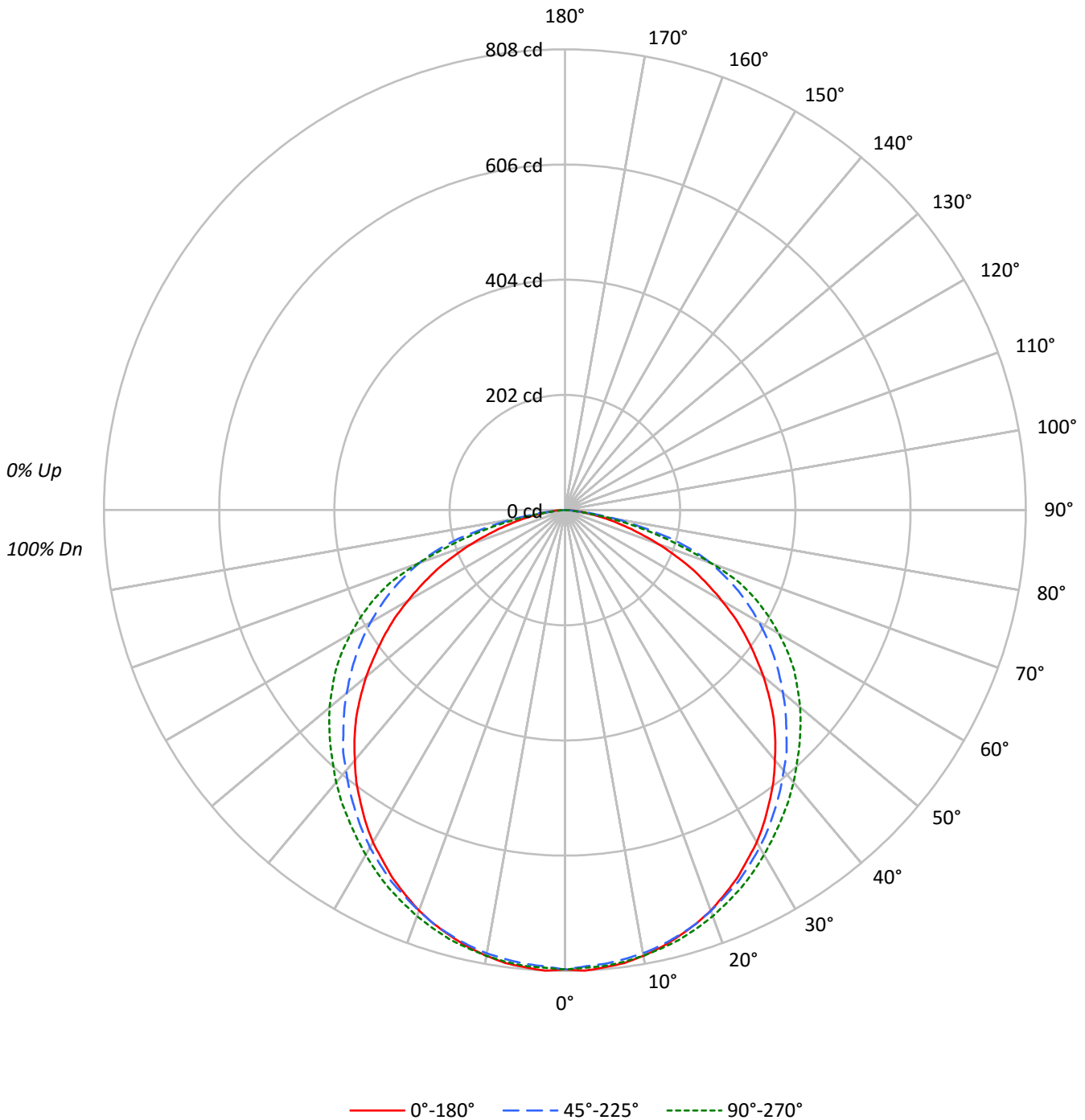
Input Watts (W): 29.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311936

CATALOG NUMBER: 14FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P311936

CATALOG NUMBER: 14FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-3500K

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°	2168	2168	2168
5°	2174	2158	2168
10°	2169	2156	2169
15°	2155	2151	2171
20°	2140	2142	2170
25°	2117	2135	2170
30°	2091	2123	2169
35°	2053	2107	2173
40°	2012	2096	2191
45°	1970	2089	2214
50°	1901	2089	2254
55°	1820	2099	2303
60°	1710	2116	2333
65°	1577	2137	2346
70°	1373	2142	2160
75°	1132	1993	1745
80°	890	1433	1167
85°	692	553	278



TEST NUMBER: P311936

CATALOG NUMBER: 14FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	3.2
10°-20°	218.8	9.2
20°-30°	332.3	14.0
30°-40°	402.7	17.0
40°-50°	424.3	17.9
50°-60°	396.1	16.7
60°-70°	316.5	13.3
70°-80°	174.2	7.3
80°-90°	30.8	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°	627.4	26.5
0°-40°	1030.1	43.4
0°-60°	1850.5	78.0
0°-90°	2372.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2372.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	806	806	806	806	806	
5°	805	803	799	804	803	77
15°	774	774	772	779	779	218
25°	713	714	719	730	731	328
35°	625	631	642	658	662	391
45°	518	527	549	574	582	398
55°	388	407	448	479	491	346
65°	248	279	336	363	368	244
75°	109	156	192	172	168	117
85°	22	28	18	11	9	27
90°	0	0	0	0	0	



TEST NUMBER: P311936

CATALOG NUMBER: 14FC22-35-UNV-L83050-HRP-CP250-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	805.5	805.5	805.5	805.5	805.5
2.5°	808.5	806.3	801.1	805.5	803.3
5°	804.8	802.6	798.8	804.1	802.6
7.5°	801.1	798.1	794.4	800.3	798.8
10°	793.6	791.4	789.1	794.4	793.6
12.5°	784.7	783.9	781.7	787.6	786.9
15°	773.5	773.5	772.0	779.4	779.4
17.5°	761.5	760.8	761.5	769.7	769.0
20°	747.4	747.4	748.1	757.8	757.8
22.5°	730.2	731.0	733.2	745.1	744.4
25°	713.1	714.5	719.0	729.5	731.0
27.5°	692.2	695.9	701.1	713.8	715.3
30°	672.8	675.0	683.2	695.2	698.1
32.5°	649.7	654.1	663.1	676.5	680.2
35°	625.0	631.0	641.5	657.9	661.6
37.5°	600.4	605.6	619.8	637.0	643.7
40°	572.8	581.8	596.7	616.1	623.6
42.5°	546.0	554.9	575.1	595.2	601.9
45°	517.6	527.3	549.0	573.6	581.8
47.5°	486.3	497.5	525.1	551.2	560.2
50°	454.2	468.4	499.0	528.1	538.5
52.5°	420.7	438.6	473.6	504.2	513.9
55°	387.9	407.2	447.5	478.9	490.8
57.5°	354.3	375.2	420.7	456.5	463.2
60°	317.7	343.1	393.1	424.4	433.4
62.5°	281.9	311.0	364.7	394.6	402.0
65°	247.6	279.0	335.6	363.2	368.5
67.5°	210.3	247.6	303.6	328.9	330.4
70°	174.5	217.8	272.2	284.2	274.5
72.5°	139.5	185.7	235.7	226.0	217.8
75°	108.9	155.9	191.7	172.3	167.8
77.5°	80.6	127.5	137.2	126.8	118.6
80°	57.4	100.7	92.5	79.1	75.3
82.5°	39.5	63.4	50.7	39.5	34.3
85°	22.4	28.3	17.9	11.2	9.0
87.5°	9.7	6.7	3.7	3.0	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)