

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: P312237

Luminaire Tested: **14FCZ2-35-UNV-L83050-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: P312237
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
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-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,RIBBED 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: 3283.0 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

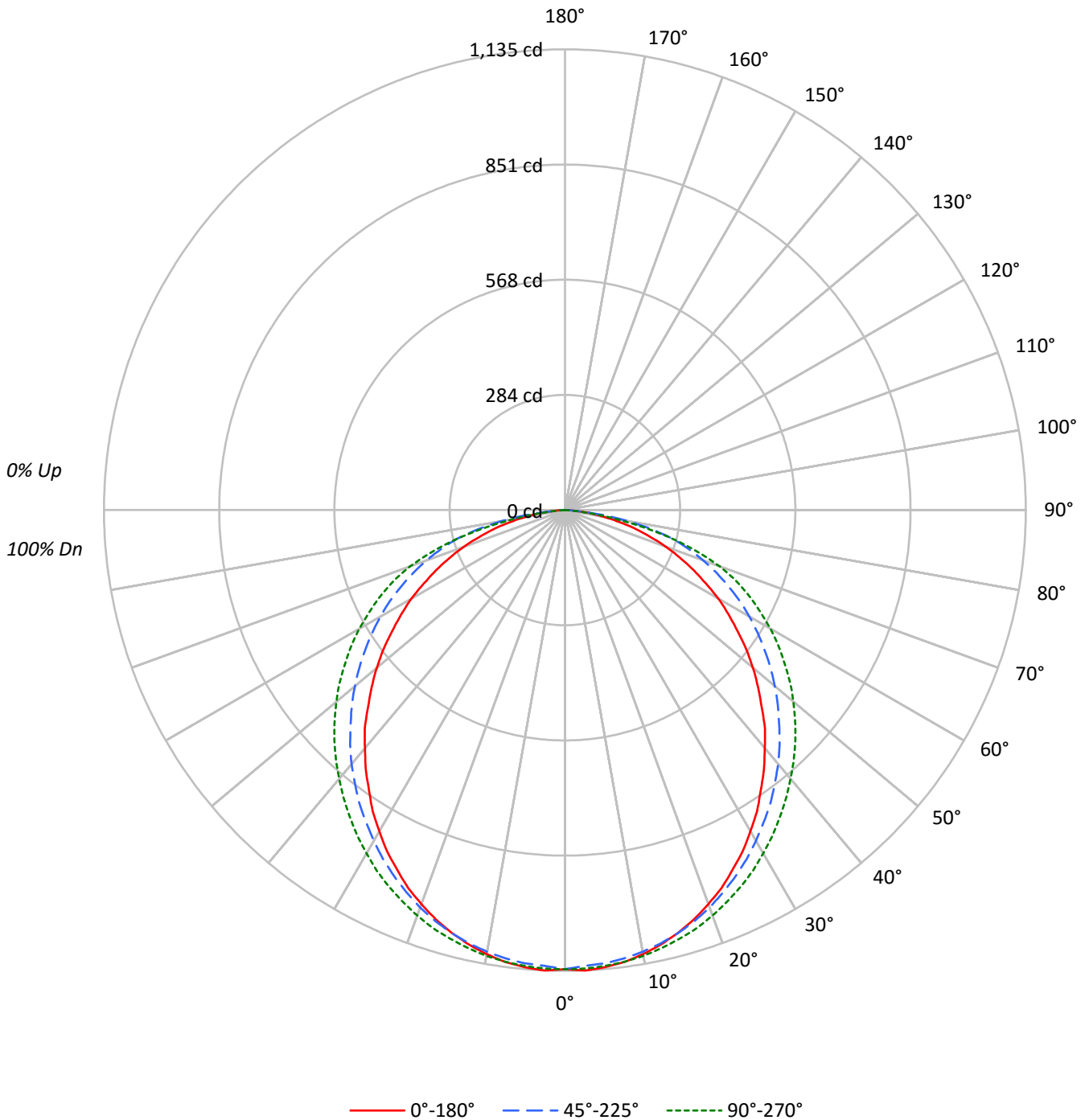
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	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	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3043	3043	3043
5°	3053	3028	3045
10°	3034	3019	3046
15°	3002	3004	3045
20°	2958	2983	3044
25°	2902	2954	3041
30°	2839	2923	3034
35°	2763	2898	3032
40°	2690	2870	3037
45°	2608	2839	3053
50°	2532	2825	3074
55°	2435	2816	3101
60°	2348	2821	3144
65°	2228	2829	3193
70°	2090	2851	3191
75°	1895	2877	2884
80°	1554	2484	2053
85°	1152	1176	475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	3.3
10°-20°	305.7	9.3
20°-30°	460.5	14.0
30°-40°	552.7	16.8
40°-50°	576.0	17.5
50°-60°	533.2	16.2
60°-70°	430.8	13.1
70°-80°	262.7	8.0
80°-90°	54.2	1.7
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°	873.3	26.6
0°-40°	1425.9	43.4
0°-60°	2535.2	77.2
0°-90°	3283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3283.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1130	1127	1121	1129	1127	107
15°	1078	1078	1078	1093	1093	304
25°	977	983	995	1020	1024	450
35°	841	854	882	914	923	527
45°	685	706	746	788	802	530
55°	519	546	600	647	661	465
65°	350	384	444	489	501	346
75°	182	222	277	281	277	191
85°	37	56	38	21	15	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1131.0	1131.0	1131.0	1131.0	1131.0
2.5°	1135.4	1131.7	1123.7	1131.7	1130.3
5°	1130.3	1127.3	1120.8	1128.8	1127.3
7.5°	1123.0	1120.0	1114.2	1123.7	1122.2
10°	1110.5	1109.0	1104.7	1115.6	1114.9
12.5°	1095.9	1095.1	1092.9	1105.4	1104.7
15°	1077.6	1078.3	1078.3	1092.9	1092.9
17.5°	1057.1	1058.5	1061.5	1077.6	1079.8
20°	1032.9	1035.8	1041.7	1060.0	1062.9
22.5°	1008.0	1010.2	1019.0	1041.0	1043.9
25°	977.3	983.1	994.8	1019.7	1024.1
27.5°	948.0	953.1	969.2	994.8	1002.2
30°	913.6	921.6	940.7	968.5	976.5
32.5°	880.6	889.4	911.4	943.6	950.9
35°	841.1	854.3	882.1	914.3	923.1
37.5°	805.2	817.7	849.2	884.3	894.6
40°	765.7	781.1	817.0	854.3	864.5
42.5°	729.1	743.8	782.6	820.6	834.5
45°	685.2	705.7	746.0	787.7	802.3
47.5°	644.9	665.4	711.5	756.2	769.4
50°	604.7	626.6	674.9	721.1	734.2
52.5°	562.9	586.4	638.3	684.5	699.8
55°	519.0	546.1	600.3	647.1	661.0
57.5°	477.3	505.1	562.9	610.5	624.4
60°	436.3	464.8	524.1	569.5	584.2
62.5°	390.9	424.6	486.1	530.7	541.7
65°	349.9	384.3	444.3	489.0	501.4
67.5°	306.7	344.1	404.1	445.1	456.8
70°	265.7	304.5	362.4	400.4	405.6
72.5°	221.8	261.3	319.9	344.1	344.1
75°	182.3	222.5	276.7	281.1	277.4
77.5°	139.1	183.7	218.9	210.1	201.3
80°	100.3	144.2	160.3	144.2	132.5
82.5°	67.3	104.7	96.6	76.9	68.1
85°	37.3	55.6	38.1	21.2	15.4
87.5°	13.9	12.4	3.7	3.7	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)