

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: P312986

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-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: P312986
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L83050-S-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3029.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

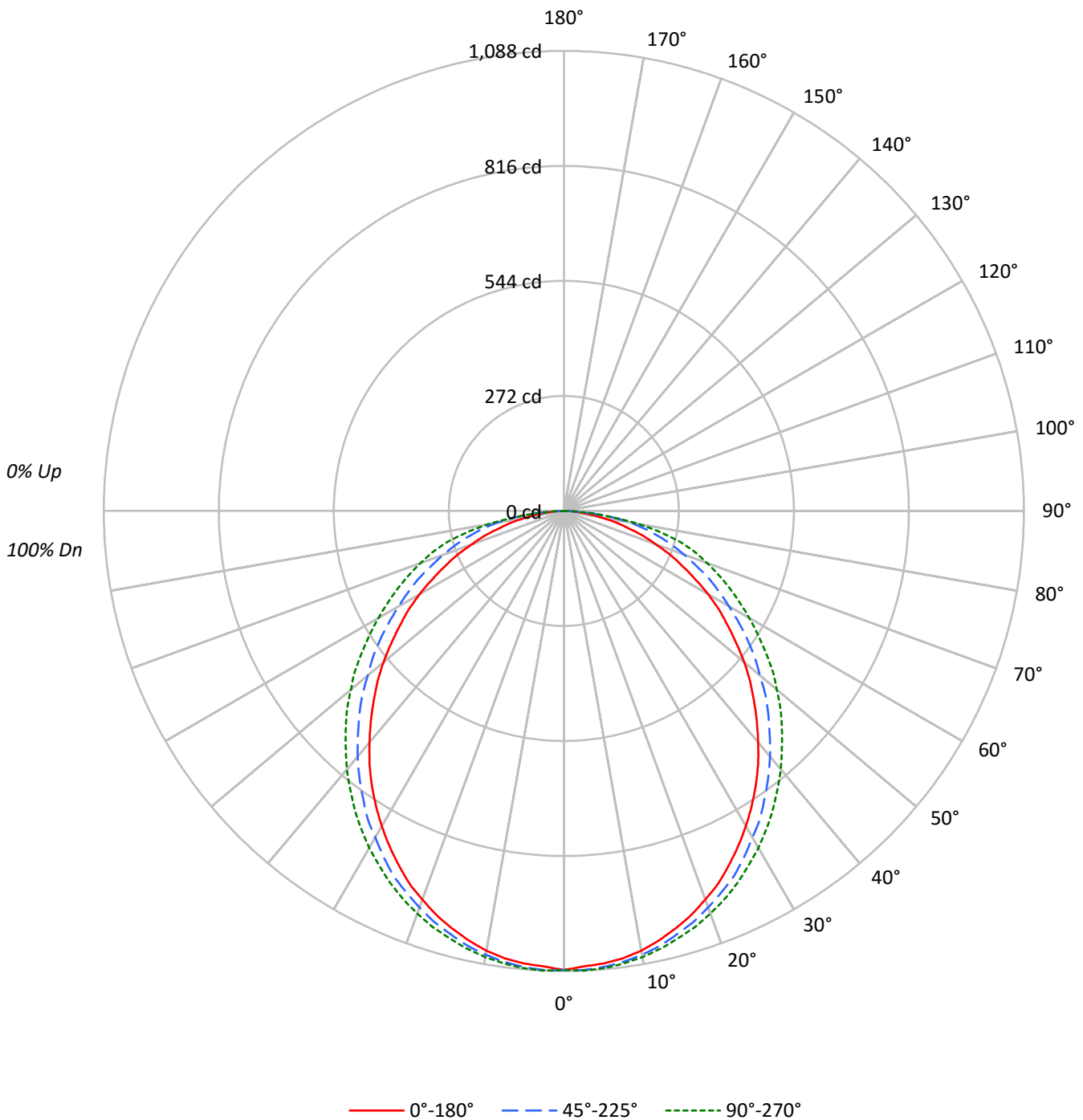
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2921	2921	2921
5°	2901	2924	2932
10°	2885	2912	2927
15°	2847	2886	2914
20°	2801	2857	2902
25°	2744	2828	2883
30°	2674	2771	2859
35°	2600	2721	2832
40°	2512	2666	2805
45°	2420	2603	2775
50°	2331	2532	2751
55°	2221	2487	2732
60°	2122	2426	2723
65°	1980	2412	2754
70°	1824	2391	2836
75°	1646	2425	2983
80°	1424	2497	2803
85°	1179	2093	2093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.6	3.4
10°-20°	292.1	9.6
20°-30°	437.1	14.4
30°-40°	517.6	17.1
40°-50°	527.5	17.4
50°-60°	472.8	15.6
60°-70°	370.1	12.2
70°-80°	238.7	7.9
80°-90°	70.5	2.3
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°	831.8	27.5
0°-40°	1349.4	44.5
0°-60°	2349.7	77.6
0°-90°	3029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3029.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1085	1085	1085	1085	1085	
5°	1074	1077	1083	1084	1085	102
15°	1022	1027	1036	1044	1046	288
25°	924	933	952	965	971	425
35°	791	801	828	854	862	495
45°	636	650	684	719	729	491
55°	473	489	530	567	582	424
65°	311	329	379	416	432	309
75°	158	182	233	273	287	170
85°	38	52	68	68	68	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.4	1085.4	1085.4	1085.4	1085.4
2.5°	1078.3	1081.1	1086.8	1088.2	1088.2
5°	1074.1	1076.9	1082.6	1084.0	1085.4
7.5°	1067.0	1068.4	1075.5	1078.3	1079.7
10°	1055.7	1058.5	1065.6	1069.8	1071.3
12.5°	1040.2	1044.4	1052.9	1058.5	1059.9
15°	1021.8	1027.4	1035.9	1044.4	1045.8
17.5°	1002.0	1007.7	1019.0	1028.9	1031.7
20°	978.0	985.0	997.8	1009.1	1013.3
22.5°	954.0	959.6	975.2	989.3	993.5
25°	924.3	932.8	952.5	965.3	970.9
27.5°	893.2	903.1	922.9	939.8	945.5
30°	860.7	870.6	891.8	913.0	920.0
32.5°	826.8	838.1	863.5	884.7	891.8
35°	791.4	801.3	828.2	853.6	862.1
37.5°	754.7	763.2	794.3	821.1	829.6
40°	715.1	726.4	758.9	790.0	798.5
42.5°	675.5	688.3	720.8	754.7	763.2
45°	636.0	650.1	684.0	719.4	729.2
47.5°	597.8	609.1	647.3	681.2	695.3
50°	556.8	568.1	604.9	643.0	657.2
52.5°	514.4	530.0	569.5	606.3	623.2
55°	473.4	489.0	530.0	566.7	582.3
57.5°	435.3	448.0	490.4	528.6	544.1
60°	394.3	405.6	450.8	491.8	505.9
62.5°	350.5	367.4	414.1	452.2	469.2
65°	310.9	329.3	378.8	415.5	432.5
67.5°	274.2	291.1	339.2	378.8	397.1
70°	231.8	254.4	303.9	343.4	360.4
72.5°	197.9	217.6	268.5	308.1	326.5
75°	158.3	182.3	233.2	272.8	286.9
77.5°	125.8	149.8	197.9	228.9	236.0
80°	91.9	115.9	161.1	176.7	180.9
82.5°	62.2	84.8	115.9	120.1	121.5
85°	38.2	52.3	67.8	67.8	67.8
87.5°	18.4	21.2	24.0	22.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)