

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: P312970

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CA125-W2A-U-3000K**

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: P312970
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-CA125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3074.0 lumens
Efficiency: N/A
Efficacy: 111.8 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

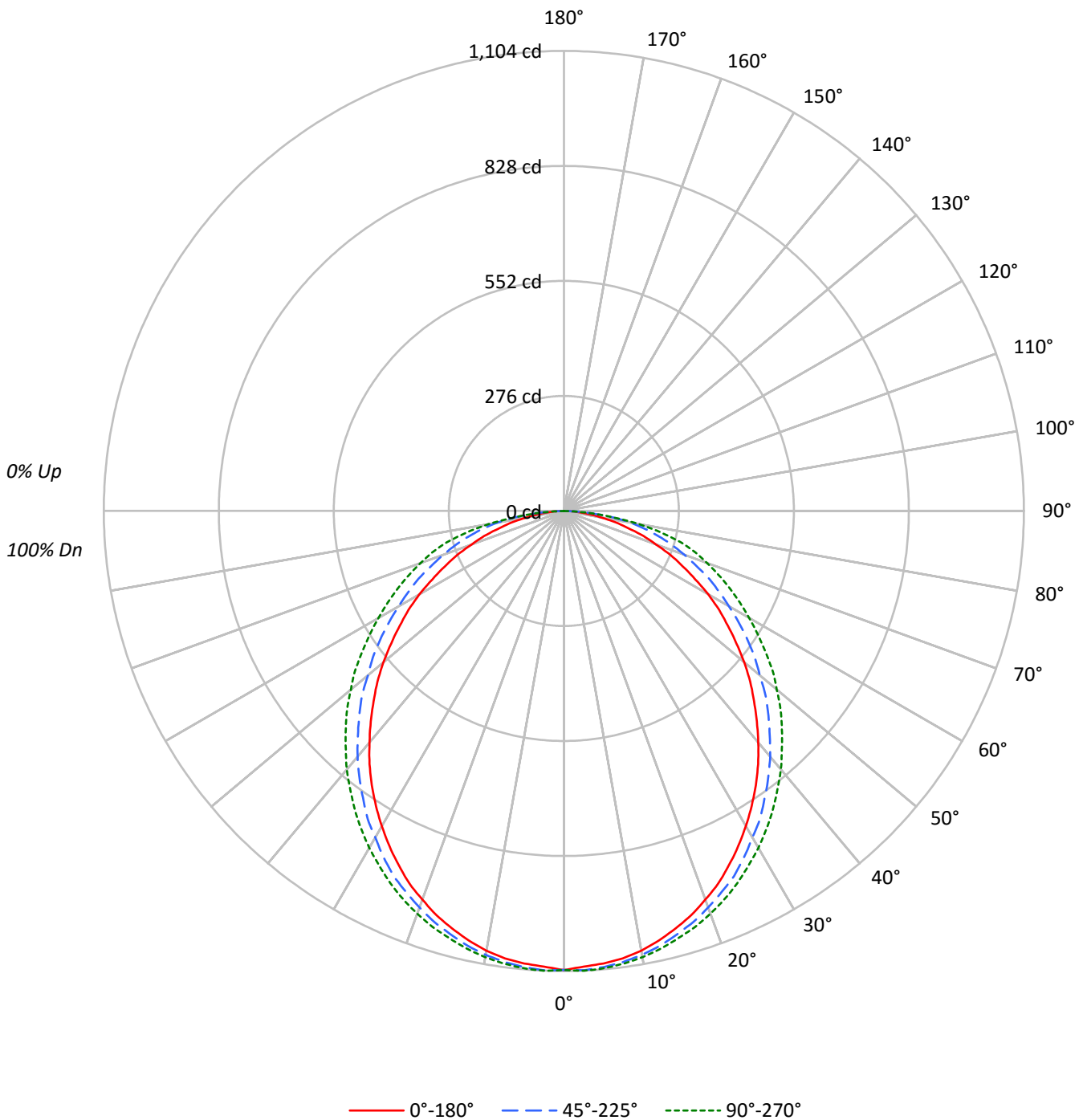
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2964	2964	2964
5°	2944	2968	2975
10°	2928	2955	2971
15°	2889	2929	2957
20°	2842	2900	2945
25°	2785	2870	2926
30°	2714	2812	2901
35°	2639	2761	2874
40°	2549	2706	2847
45°	2456	2642	2817
50°	2366	2570	2792
55°	2254	2523	2772
60°	2154	2462	2764
65°	2009	2448	2795
70°	1851	2426	2877
75°	1670	2461	3028
80°	1444	2534	2845
85°	1195	2124	2124



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.2	3.4
10°-20°	296.4	9.6
20°-30°	443.6	14.4
30°-40°	525.3	17.1
40°-50°	535.3	17.4
50°-60°	479.8	15.6
60°-70°	375.6	12.2
70°-80°	242.2	7.9
80°-90°	71.5	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°	844.2	27.5
0°-40°	1369.4	44.5
0°-60°	2384.6	77.6
0°-90°	3074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1102	1102	1102	1102	1102	
5°	1090	1093	1099	1100	1102	103
15°	1037	1043	1051	1060	1061	292
25°	938	947	967	980	985	432
35°	803	813	840	866	875	502
45°	645	660	694	730	740	498
55°	480	496	538	575	591	431
65°	316	334	384	422	439	313
75°	161	185	237	277	291	172
85°	39	53	69	69	69	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1101.5	1101.5	1101.5	1101.5	1101.5
2.5°	1094.3	1097.2	1102.9	1104.4	1104.4
5°	1090.0	1092.9	1098.6	1100.1	1101.5
7.5°	1082.9	1084.3	1091.5	1094.3	1095.8
10°	1071.4	1074.3	1081.4	1085.7	1087.2
12.5°	1055.6	1059.9	1068.5	1074.3	1075.7
15°	1037.0	1042.7	1051.3	1059.9	1061.4
17.5°	1016.9	1022.6	1034.1	1044.1	1047.0
20°	992.5	999.7	1012.6	1024.1	1028.4
22.5°	968.1	973.9	989.6	1004.0	1008.3
25°	938.0	946.6	966.7	979.6	985.3
27.5°	906.5	916.5	936.6	953.8	959.5
30°	873.5	883.5	905.0	926.5	933.7
32.5°	839.0	850.5	876.3	897.8	905.0
35°	803.2	813.2	840.5	866.3	874.9
37.5°	765.9	774.5	806.1	833.3	841.9
40°	725.7	737.2	770.2	801.8	810.4
42.5°	685.6	698.5	731.5	765.9	774.5
45°	645.4	659.8	694.2	730.0	740.1
47.5°	606.7	618.2	656.9	691.3	705.7
50°	565.1	576.6	613.9	652.6	666.9
52.5°	522.1	537.8	578.0	615.3	632.5
55°	480.5	496.3	537.8	575.1	590.9
57.5°	441.8	454.7	497.7	536.4	552.2
60°	400.2	411.6	457.5	499.1	513.5
62.5°	355.7	372.9	420.2	459.0	476.2
65°	315.5	334.2	384.4	421.7	438.9
67.5°	278.2	295.5	344.2	384.4	403.0
70°	235.2	258.2	308.4	348.5	365.7
72.5°	200.8	220.9	272.5	312.7	331.3
75°	160.6	185.0	236.7	276.8	291.2
77.5°	127.6	152.0	200.8	232.3	239.5
80°	93.2	117.6	163.5	179.3	183.6
82.5°	63.1	86.1	117.6	121.9	123.3
85°	38.7	53.1	68.8	68.8	68.8
87.5°	18.6	21.5	24.4	22.9	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)