

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: P312822

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CA125-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: P312822
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 3238.0 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

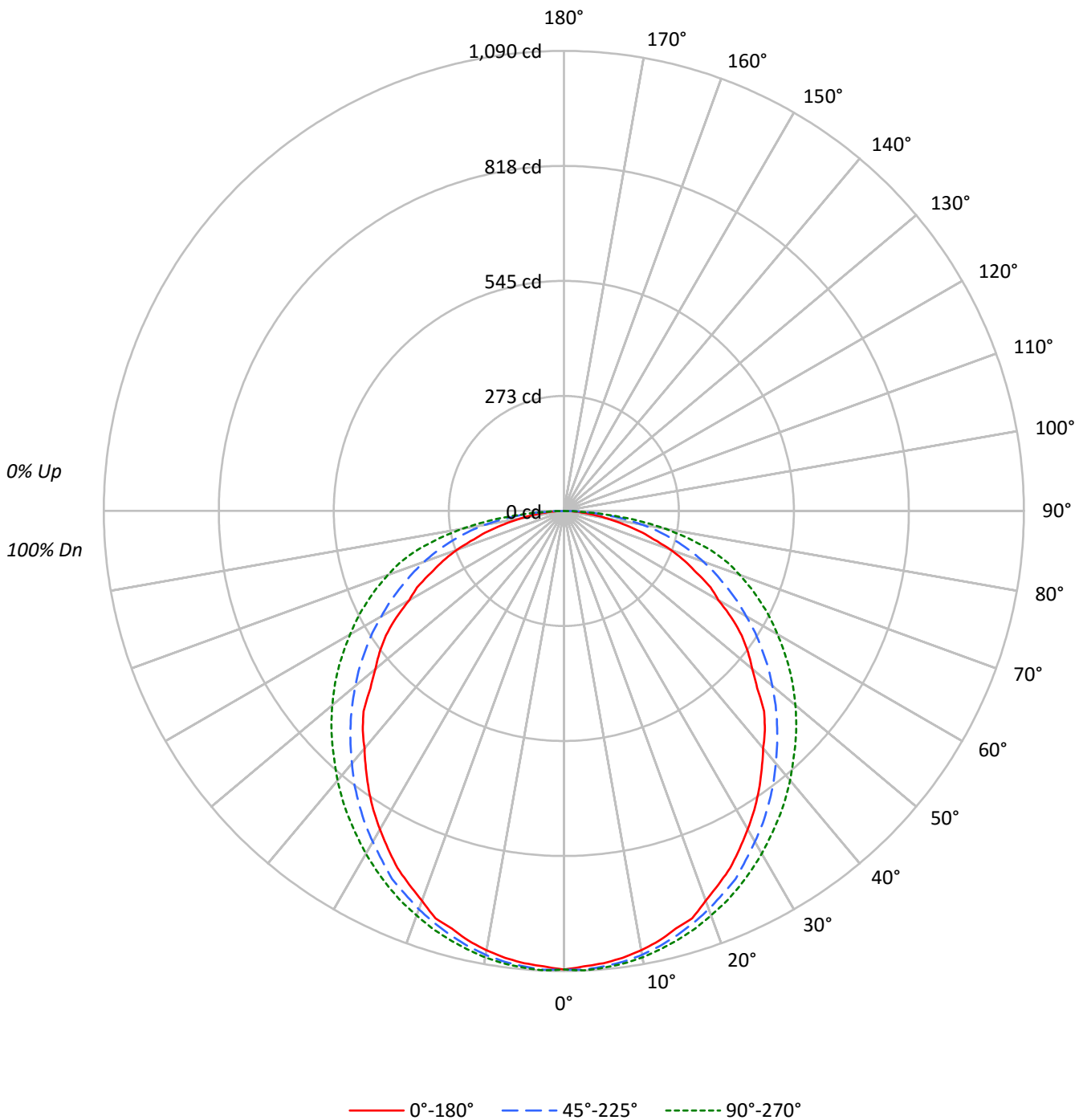
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2923	2923	2923
5°	2905	2926	2935
10°	2888	2918	2935
15°	2854	2897	2927
20°	2814	2876	2920
25°	2770	2858	2917
30°	2706	2812	2913
35°	2647	2780	2917
40°	2581	2744	2929
45°	2554	2719	2955
50°	2439	2699	2997
55°	2414	2690	3061
60°	2277	2686	3145
65°	2210	2704	3286
70°	2122	2768	3487
75°	1934	2852	3754
80°	1657	2954	3795
85°	1340	2822	3254



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	3.2
10°-20°	293.3	9.1
20°-30°	441.4	13.6
30°-40°	529.7	16.4
40°-50°	553.7	17.1
50°-60°	516.0	15.9
60°-70°	423.2	13.1
70°-80°	285.2	8.8
80°-90°	92.9	2.9
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°	837.4	25.9
0°-40°	1367.1	42.2
0°-60°	2436.8	75.3
0°-90°	3238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3238.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1076	1079	1083	1085	1086	102
15°	1024	1031	1040	1049	1051	289
25°	933	939	962	976	982	429
35°	806	817	846	876	888	504
45°	671	676	714	758	776	513
55°	514	524	573	628	652	456
65°	347	363	425	487	516	345
75°	186	206	274	336	361	196
85°	43	62	91	107	105	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.4	1086.4	1086.4	1086.4	1086.4
2.5°	1080.2	1083.3	1087.9	1089.5	1089.5
5°	1075.5	1078.6	1083.3	1084.8	1086.4
7.5°	1067.8	1070.9	1077.1	1080.2	1081.7
10°	1056.9	1060.0	1067.8	1072.4	1074.0
12.5°	1043.0	1046.1	1055.4	1061.6	1063.1
15°	1024.4	1030.6	1039.9	1049.2	1050.7
17.5°	1012.0	1010.4	1022.8	1033.7	1036.8
20°	982.5	990.3	1004.2	1016.6	1019.7
22.5°	957.7	963.9	982.5	996.5	1002.7
25°	933.0	939.1	962.4	976.3	982.5
27.5°	902.0	911.3	933.0	953.1	960.8
30°	871.0	880.3	905.1	928.3	937.6
32.5°	840.0	850.8	877.2	902.0	912.8
35°	805.9	816.7	846.2	875.6	888.0
37.5°	770.2	784.2	815.2	847.7	861.7
40°	734.6	748.5	781.1	818.3	833.8
42.5°	705.1	711.3	748.5	788.8	804.3
45°	671.0	675.7	714.4	757.8	776.4
47.5°	621.5	638.5	680.3	728.4	747.0
50°	582.7	601.3	644.7	695.8	716.0
52.5°	550.2	562.6	610.6	661.7	685.0
55°	514.5	523.8	573.4	627.6	652.4
57.5°	471.1	488.2	537.8	593.6	618.4
60°	423.1	444.8	499.0	559.5	584.3
62.5°	392.1	404.5	463.4	523.8	551.7
65°	347.1	362.6	424.6	486.6	516.1
67.5°	310.0	325.4	389.0	451.0	480.4
70°	269.7	285.2	351.8	413.8	443.2
72.5°	223.2	244.9	314.6	376.6	407.6
75°	186.0	206.1	274.3	336.3	361.1
77.5°	144.1	170.5	234.0	285.2	303.8
80°	106.9	133.3	190.6	227.8	244.9
82.5°	72.8	99.2	142.6	170.5	179.8
85°	43.4	62.0	91.4	106.9	105.4
87.5°	20.1	26.3	37.2	37.2	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)