

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: P312816

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CA08-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: P312816
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 3095.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

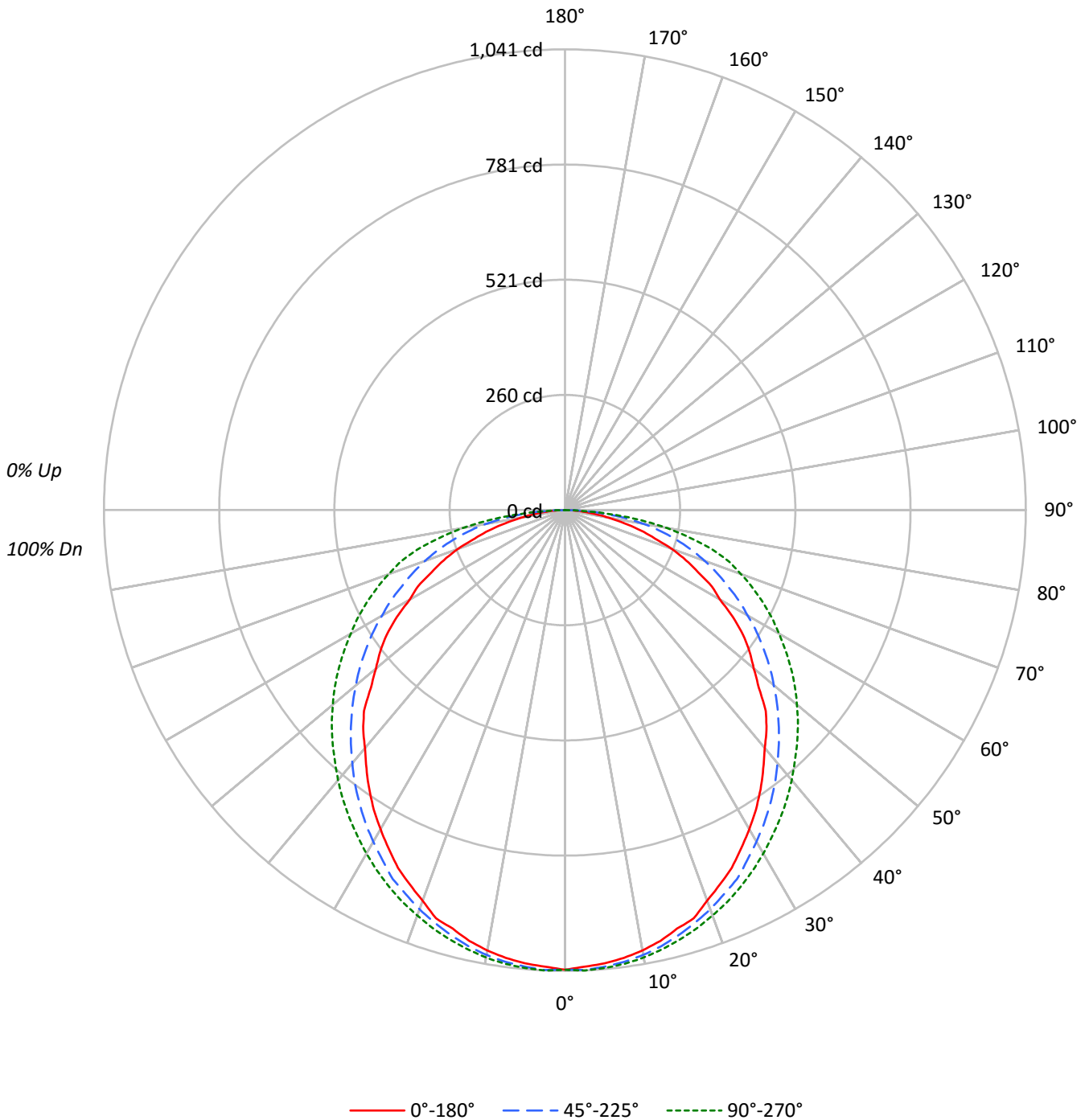
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2794	2794	2794
5°	2777	2797	2805
10°	2761	2789	2805
15°	2728	2769	2798
20°	2690	2749	2791
25°	2648	2731	2789
30°	2587	2688	2785
35°	2530	2657	2788
40°	2466	2623	2799
45°	2441	2599	2824
50°	2332	2580	2865
55°	2307	2571	2926
60°	2176	2567	3006
65°	2113	2585	3141
70°	2028	2646	3334
75°	1849	2726	3588
80°	1584	2824	3626
85°	1281	2699	3109



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.3	3.2
10°-20°	280.3	9.1
20°-30°	421.9	13.6
30°-40°	506.3	16.4
40°-50°	529.2	17.1
50°-60°	493.2	15.9
60°-70°	404.5	13.1
70°-80°	272.6	8.8
80°-90°	88.8	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°	800.4	25.9
0°-40°	1306.8	42.2
0°-60°	2329.1	75.3
0°-90°	3095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1028	1031	1035	1037	1038	98
15°	979	985	994	1003	1004	277
25°	892	898	920	933	939	410
35°	770	781	809	837	849	482
45°	641	646	683	724	742	490
55°	492	501	548	600	624	436
65°	332	347	406	465	493	330
75°	178	197	262	321	345	187
85°	42	59	87	102	101	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1038.4	1038.4	1038.4	1038.4	1038.4
2.5°	1032.5	1035.4	1039.9	1041.4	1041.4
5°	1028.0	1031.0	1035.4	1036.9	1038.4
7.5°	1020.6	1023.6	1029.5	1032.5	1034.0
10°	1010.3	1013.2	1020.6	1025.1	1026.5
12.5°	996.9	999.9	1008.8	1014.7	1016.2
15°	979.1	985.1	994.0	1002.8	1004.3
17.5°	967.3	965.8	977.7	988.0	991.0
20°	939.2	946.6	959.9	971.7	974.7
22.5°	915.4	921.4	939.2	952.5	958.4
25°	891.7	897.7	919.9	933.2	939.2
27.5°	862.1	871.0	891.7	911.0	918.4
30°	832.5	841.4	865.1	887.3	896.2
32.5°	802.9	813.2	838.4	862.1	872.5
35°	770.3	780.7	808.8	836.9	848.8
37.5°	736.2	749.5	779.2	810.3	823.6
40°	702.1	715.5	746.6	782.1	796.9
42.5°	674.0	679.9	715.5	754.0	768.8
45°	641.4	645.9	682.9	724.4	742.1
47.5°	594.0	610.3	650.3	696.2	714.0
50°	557.0	574.7	616.2	665.1	684.4
52.5°	525.9	537.7	583.6	632.5	654.7
55°	491.8	500.7	548.1	599.9	623.6
57.5°	450.3	466.6	514.0	567.3	591.0
60°	404.4	425.1	477.0	534.8	558.5
62.5°	374.8	386.6	442.9	500.7	527.3
65°	331.8	346.6	405.9	465.1	493.3
67.5°	296.3	311.1	371.8	431.1	459.2
70°	257.7	272.6	336.3	395.5	423.7
72.5°	213.3	234.0	300.7	360.0	389.6
75°	177.8	197.0	262.2	321.4	345.1
77.5°	137.8	162.9	223.7	272.6	290.3
80°	102.2	127.4	182.2	217.8	234.0
82.5°	69.6	94.8	136.3	162.9	171.8
85°	41.5	59.3	87.4	102.2	100.7
87.5°	19.3	25.2	35.6	35.6	34.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)