

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: P308738

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CA08-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: P308738
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-L82765-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 3090.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

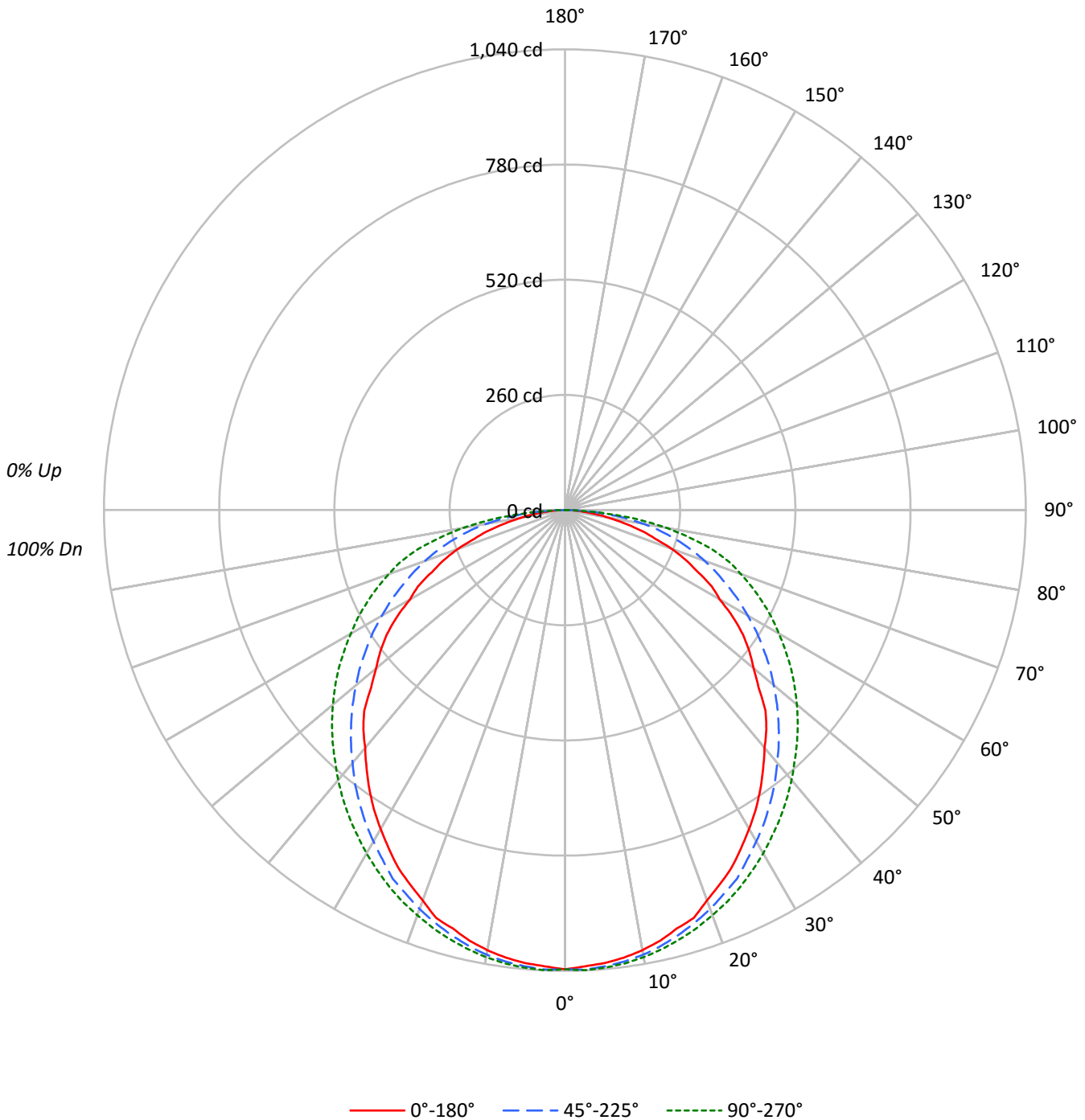
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2790	2790	2790
5°	2773	2793	2800
10°	2756	2784	2801
15°	2724	2765	2793
20°	2685	2744	2787
25°	2643	2727	2784
30°	2583	2684	2780
35°	2526	2653	2784
40°	2462	2618	2795
45°	2437	2595	2820
50°	2328	2575	2861
55°	2304	2567	2921
60°	2173	2563	3001
65°	2110	2580	3136
70°	2024	2641	3328
75°	1845	2722	3583
80°	1581	2819	3622
85°	1278	2695	3106



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.1	3.2
10°-20°	279.9	9.1
20°-30°	421.2	13.6
30°-40°	505.5	16.4
40°-50°	528.4	17.1
50°-60°	492.4	15.9
60°-70°	403.9	13.1
70°-80°	272.1	8.8
80°-90°	88.6	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°	799.1	25.9
0°-40°	1304.6	42.2
0°-60°	2325.4	75.3
0°-90°	3090.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3090.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1026	1029	1034	1035	1037	97
15°	978	984	992	1001	1003	276
25°	890	896	918	932	938	409
35°	769	779	808	836	847	481
45°	640	645	682	723	741	489
55°	491	500	547	599	623	435
65°	331	346	405	464	492	330
75°	178	197	262	321	345	187
85°	41	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°	1036.7	1036.7	1036.7	1036.7	1036.7
2.5°	1030.8	1033.8	1038.2	1039.7	1039.7
5°	1026.4	1029.3	1033.8	1035.2	1036.7
7.5°	1019.0	1021.9	1027.8	1030.8	1032.3
10°	1008.6	1011.6	1019.0	1023.4	1024.9
12.5°	995.3	998.3	1007.1	1013.1	1014.5
15°	977.6	983.5	992.4	1001.2	1002.7
17.5°	965.7	964.3	976.1	986.4	989.4
20°	937.6	945.0	958.3	970.2	973.1
22.5°	914.0	919.9	937.6	950.9	956.9
25°	890.3	896.2	918.4	931.7	937.6
27.5°	860.7	869.6	890.3	909.5	916.9
30°	831.2	840.0	863.7	885.9	894.7
32.5°	801.6	811.9	837.1	860.7	871.1
35°	769.0	779.4	807.5	835.6	847.4
37.5°	735.0	748.3	777.9	809.0	822.3
40°	701.0	714.3	745.4	780.9	795.7
42.5°	672.9	678.8	714.3	752.8	767.6
45°	640.4	644.8	681.8	723.2	740.9
47.5°	593.0	609.3	649.2	695.1	712.8
50°	556.1	573.8	615.2	664.0	683.3
52.5°	525.0	536.8	582.7	631.5	653.7
55°	491.0	499.9	547.2	599.0	622.6
57.5°	449.6	465.9	513.2	566.4	590.1
60°	403.7	424.4	476.2	533.9	557.6
62.5°	374.2	386.0	442.2	499.9	526.5
65°	331.3	346.1	405.2	464.4	492.5
67.5°	295.8	310.6	371.2	430.4	458.5
70°	257.3	272.1	335.7	394.9	423.0
72.5°	213.0	233.7	300.2	359.4	389.0
75°	177.5	196.7	261.8	320.9	344.6
77.5°	137.5	162.7	223.3	272.1	289.9
80°	102.0	127.2	181.9	217.4	233.7
82.5°	69.5	94.7	136.1	162.7	171.6
85°	41.4	59.2	87.3	102.0	100.6
87.5°	19.2	25.1	35.5	35.5	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)