

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: P308742

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CA08-W2A-U-5700K**

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: P308742
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-5700K
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: 3226.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

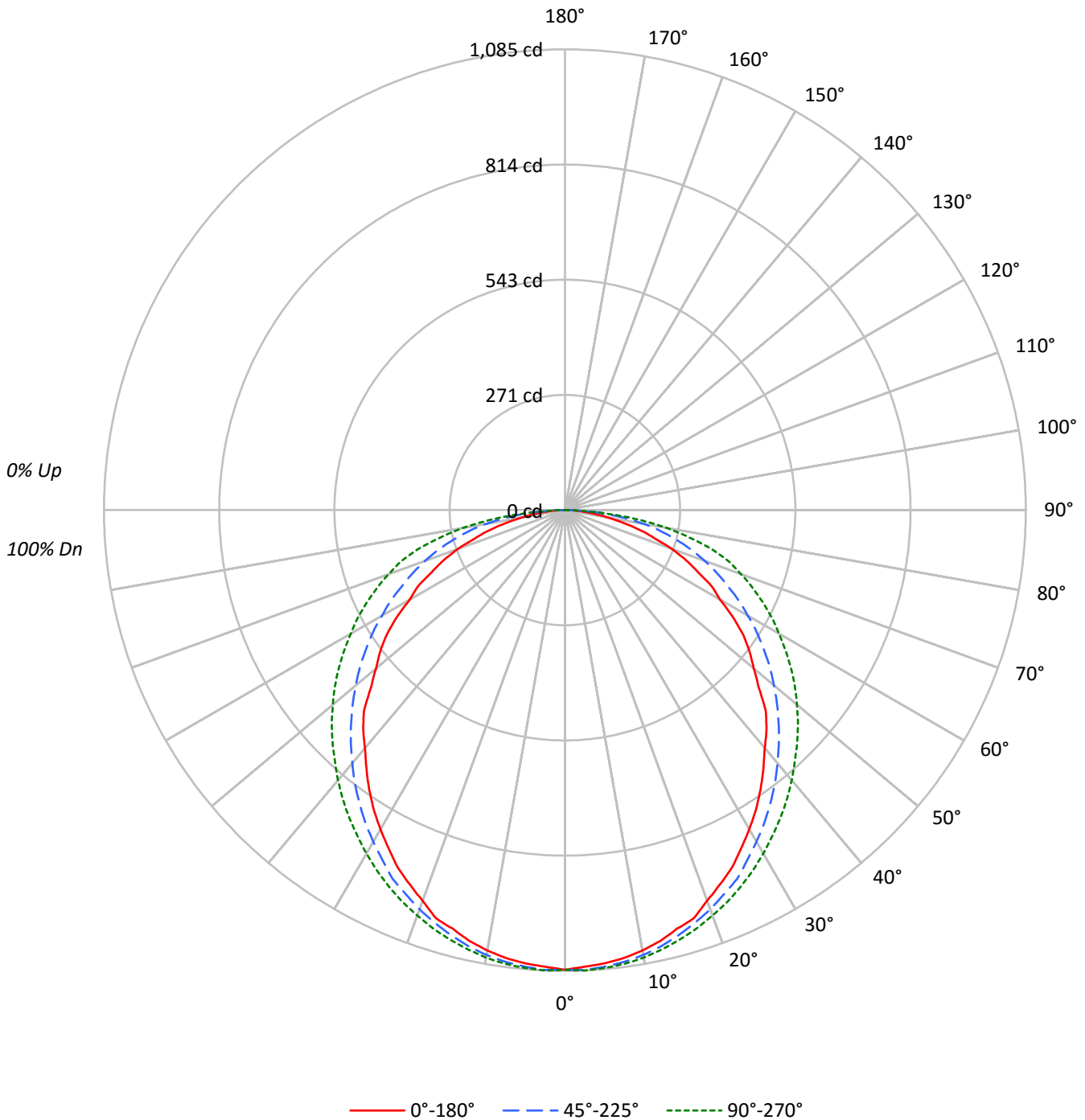
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2913	2913	2913
5°	2894	2915	2924
10°	2877	2907	2924
15°	2843	2886	2916
20°	2803	2865	2909
25°	2760	2847	2907
30°	2696	2802	2903
35°	2638	2769	2906
40°	2571	2734	2918
45°	2544	2709	2944
50°	2430	2689	2986
55°	2405	2680	3050
60°	2268	2676	3133
65°	2202	2694	3274
70°	2114	2758	3474
75°	1927	2842	3741
80°	1650	2943	3781
85°	1334	2813	3242



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.4	3.2
10°-20°	292.2	9.1
20°-30°	439.7	13.6
30°-40°	527.8	16.4
40°-50°	551.6	17.1
50°-60°	514.1	15.9
60°-70°	421.6	13.1
70°-80°	284.1	8.8
80°-90°	92.5	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°	834.3	25.9
0°-40°	1362.1	42.2
0°-60°	2427.8	75.3
0°-90°	3226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3226.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1072	1075	1079	1081	1082	102
15°	1021	1027	1036	1045	1047	288
25°	930	936	959	973	979	427
35°	803	814	843	872	885	502
45°	669	673	712	755	774	511
55°	513	522	571	625	650	454
65°	346	361	423	485	514	344
75°	185	205	273	335	360	195
85°	43	62	91	106	105	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1082.4	1082.4	1082.4	1082.4	1082.4
2.5°	1076.2	1079.3	1083.9	1085.4	1085.4
5°	1071.5	1074.6	1079.3	1080.8	1082.4
7.5°	1063.8	1066.9	1073.1	1076.2	1077.7
10°	1053.0	1056.1	1063.8	1068.5	1070.0
12.5°	1039.1	1042.2	1051.5	1057.6	1059.2
15°	1020.6	1026.8	1036.0	1045.3	1046.8
17.5°	1008.2	1006.7	1019.0	1029.9	1032.9
20°	978.9	986.6	1000.5	1012.9	1016.0
22.5°	954.2	960.4	978.9	992.8	999.0
25°	929.5	935.7	958.8	972.7	978.9
27.5°	898.6	907.9	929.5	949.6	957.3
30°	867.7	877.0	901.7	924.9	934.1
32.5°	836.9	847.7	873.9	898.6	909.4
35°	802.9	813.7	843.0	872.4	884.7
37.5°	767.4	781.3	812.1	844.6	858.5
40°	731.9	745.8	778.2	815.2	830.7
42.5°	702.5	708.7	745.8	785.9	801.3
45°	668.6	673.2	711.8	755.0	773.5
47.5°	619.1	636.1	677.8	725.7	744.2
50°	580.5	599.1	642.3	693.3	713.3
52.5°	548.1	560.5	608.3	659.3	682.5
55°	512.6	521.9	571.3	625.3	650.0
57.5°	469.4	486.4	535.8	591.4	616.1
60°	421.5	443.1	497.2	557.4	582.1
62.5°	390.6	403.0	461.7	521.9	549.7
65°	345.9	361.3	423.1	484.8	514.2
67.5°	308.8	324.2	387.5	449.3	478.6
70°	268.7	284.1	350.5	412.3	441.6
72.5°	222.3	244.0	313.4	375.2	406.1
75°	185.3	205.4	273.3	335.0	359.8
77.5°	143.6	169.8	233.1	284.1	302.6
80°	106.5	132.8	189.9	227.0	244.0
82.5°	72.6	98.8	142.0	169.8	179.1
85°	43.2	61.8	91.1	106.5	105.0
87.5°	20.1	26.2	37.1	37.1	35.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)