

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: P308739

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CA08-W2A-U-4500K**

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: P308739
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-4500K
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: 3144.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

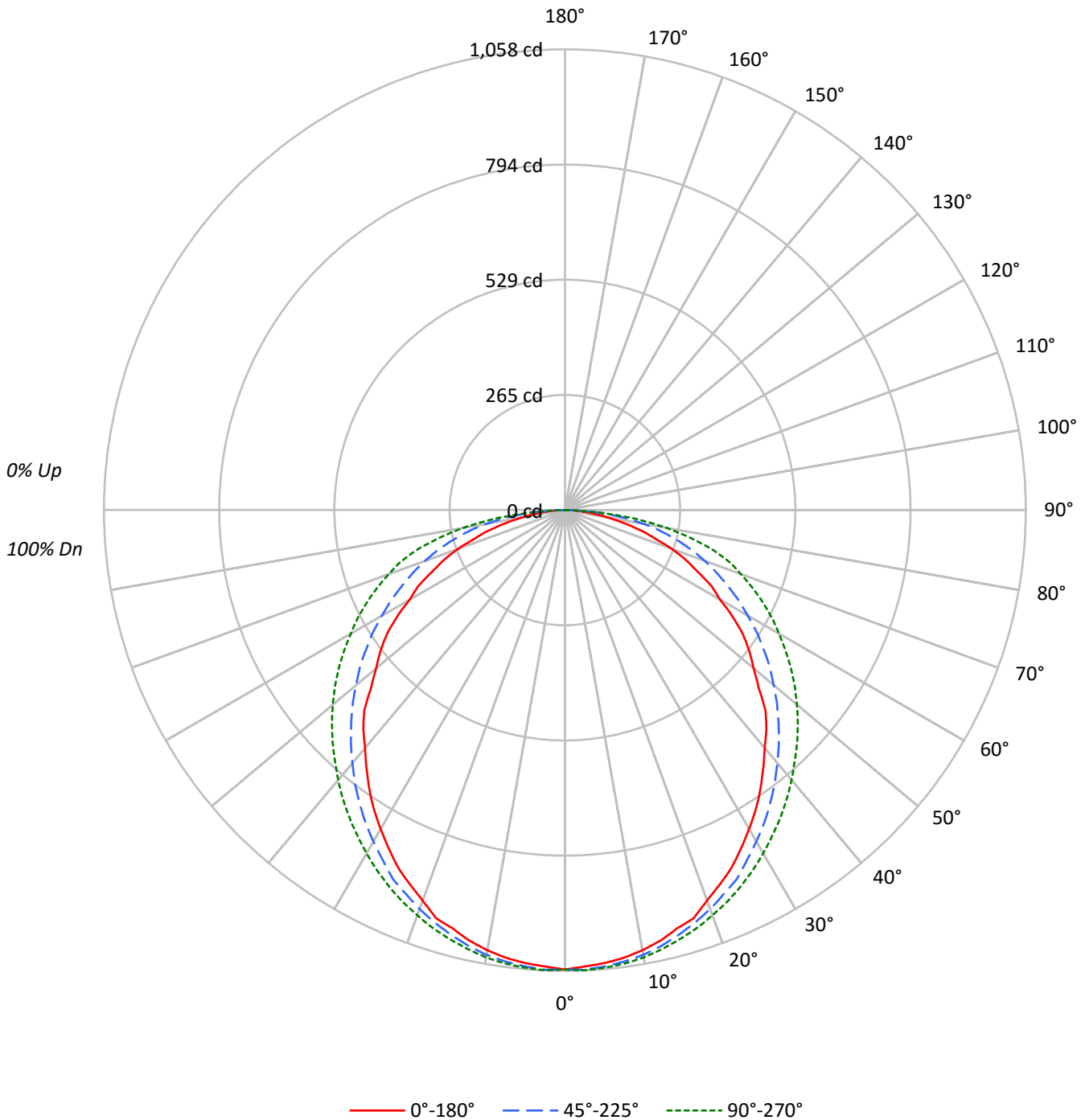
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2838	2838	2838
5°	2821	2841	2849
10°	2804	2833	2849
15°	2771	2813	2842
20°	2732	2792	2835
25°	2690	2775	2833
30°	2628	2731	2829
35°	2571	2699	2832
40°	2506	2664	2844
45°	2480	2640	2869
50°	2369	2621	2910
55°	2344	2612	2972
60°	2211	2608	3053
65°	2146	2625	3191
70°	2060	2688	3386
75°	1878	2769	3645
80°	1609	2868	3685
85°	1300	2742	3159



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	3.2
10°-20°	284.7	9.1
20°-30°	428.6	13.6
30°-40°	514.3	16.4
40°-50°	537.6	17.1
50°-60°	501.0	15.9
60°-70°	410.9	13.1
70°-80°	276.9	8.8
80°-90°	90.2	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°	813.1	25.9
0°-40°	1327.5	42.2
0°-60°	2366.0	75.3
0°-90°	3144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1055	1055	1055	1055	1055	
5°	1044	1047	1052	1053	1055	99
15°	995	1001	1010	1019	1020	281
25°	906	912	934	948	954	416
35°	782	793	822	850	862	489
45°	652	656	694	736	754	498
55°	500	509	557	609	634	443
65°	337	352	412	472	501	335
75°	181	200	266	326	351	190
85°	42	60	89	104	102	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1054.8	1054.8	1054.8	1054.8	1054.8
2.5°	1048.8	1051.8	1056.3	1057.8	1057.8
5°	1044.3	1047.3	1051.8	1053.3	1054.8
7.5°	1036.8	1039.8	1045.8	1048.8	1050.3
10°	1026.2	1029.3	1036.8	1041.3	1042.8
12.5°	1012.7	1015.7	1024.7	1030.8	1032.3
15°	994.6	1000.7	1009.7	1018.7	1020.2
17.5°	982.6	981.1	993.1	1003.7	1006.7
20°	954.0	961.5	975.1	987.1	990.1
22.5°	929.9	936.0	954.0	967.6	973.6
25°	905.9	911.9	934.5	948.0	954.0
27.5°	875.8	884.8	905.9	925.4	933.0
30°	845.7	854.7	878.8	901.4	910.4
32.5°	815.6	826.1	851.7	875.8	886.3
35°	782.5	793.0	821.6	850.2	862.2
37.5°	747.9	761.4	791.5	823.1	836.6
40°	713.3	726.8	758.4	794.5	809.6
42.5°	684.7	690.7	726.8	765.9	781.0
45°	651.6	656.1	693.7	735.8	753.9
47.5°	603.4	620.0	660.6	707.2	725.3
50°	565.8	583.8	626.0	675.6	695.2
52.5°	534.2	546.2	592.9	642.5	665.1
55°	499.6	508.6	556.8	609.4	633.5
57.5°	457.4	474.0	522.2	576.3	600.4
60°	410.8	431.9	484.5	543.2	567.3
62.5°	380.7	392.7	449.9	508.6	535.7
65°	337.1	352.1	412.3	472.5	501.1
67.5°	301.0	316.0	377.7	437.9	466.5
70°	261.8	276.9	341.6	401.8	430.4
72.5°	216.7	237.8	305.5	365.7	395.8
75°	180.6	200.1	266.3	326.5	350.6
77.5°	139.9	165.5	227.2	276.9	294.9
80°	103.8	129.4	185.1	221.2	237.8
82.5°	70.7	96.3	138.4	165.5	174.6
85°	42.1	60.2	88.8	103.8	102.3
87.5°	19.6	25.6	36.1	36.1	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)