

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: P308740

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CA08-W2A-U-5000K**

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: P308740
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-5000K
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: 3187.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

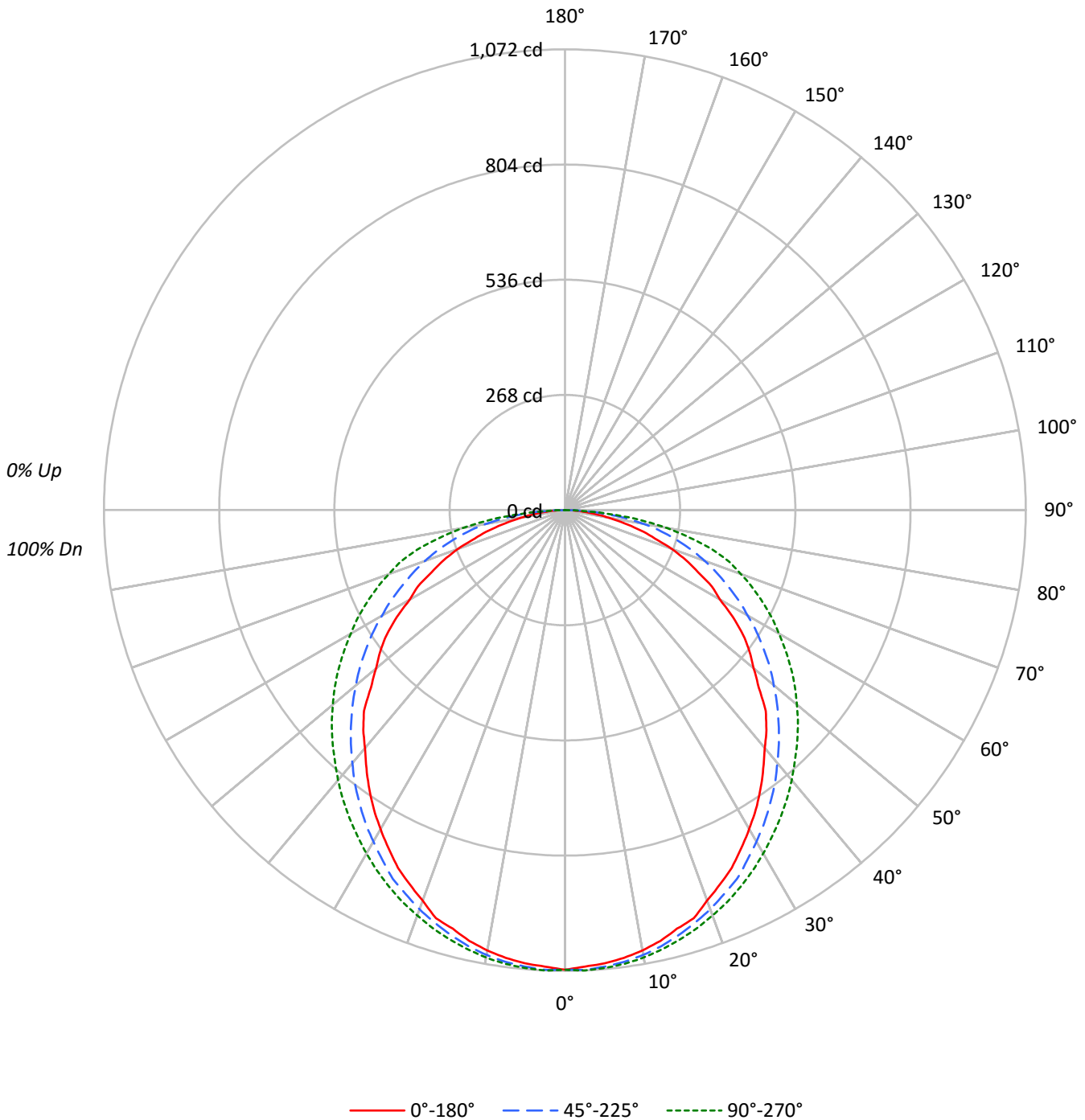
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2877	2877	2877
5°	2860	2880	2888
10°	2843	2872	2889
15°	2809	2851	2881
20°	2769	2830	2874
25°	2727	2812	2871
30°	2664	2768	2867
35°	2606	2736	2871
40°	2540	2701	2883
45°	2514	2676	2908
50°	2401	2656	2950
55°	2376	2648	3013
60°	2241	2644	3095
65°	2176	2661	3234
70°	2088	2725	3432
75°	1903	2807	3695
80°	1630	2907	3735
85°	1318	2779	3202



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	3.2
10°-20°	288.6	9.1
20°-30°	434.4	13.6
30°-40°	521.4	16.4
40°-50°	544.9	17.1
50°-60°	507.9	15.9
60°-70°	416.5	13.1
70°-80°	280.7	8.8
80°-90°	91.4	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°	824.2	25.9
0°-40°	1345.6	42.2
0°-60°	2398.4	75.3
0°-90°	3187.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3187.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1069	1069	1069	1069	1069	
5°	1059	1062	1066	1068	1069	100
15°	1008	1014	1024	1033	1034	285
25°	918	924	947	961	967	422
35°	793	804	833	862	874	496
45°	660	665	703	746	764	505
55°	506	516	564	618	642	449
65°	342	357	418	479	508	340
75°	183	203	270	331	355	192
85°	43	61	90	105	104	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1069.3	1069.3	1069.3	1069.3	1069.3
2.5°	1063.2	1066.2	1070.8	1072.3	1072.3
5°	1058.6	1061.6	1066.2	1067.7	1069.3
7.5°	1051.0	1054.0	1060.1	1063.2	1064.7
10°	1040.3	1043.3	1051.0	1055.5	1057.1
12.5°	1026.6	1029.6	1038.8	1044.9	1046.4
15°	1008.3	1014.4	1023.5	1032.7	1034.2
17.5°	996.0	994.5	1006.7	1017.4	1020.5
20°	967.1	974.7	988.4	1000.6	1003.7
22.5°	942.7	948.8	967.1	980.8	986.9
25°	918.3	924.4	947.2	961.0	967.1
27.5°	887.7	896.9	918.3	938.1	945.7
30°	857.2	866.4	890.8	913.7	922.8
32.5°	826.7	837.4	863.3	887.7	898.4
35°	793.2	803.9	832.8	861.8	874.0
37.5°	758.1	771.8	802.3	834.4	848.1
40°	723.0	736.7	768.8	805.4	820.6
42.5°	694.0	700.1	736.7	776.4	791.7
45°	660.5	665.0	703.2	745.9	764.2
47.5°	611.7	628.4	669.6	716.9	735.2
50°	573.5	591.8	634.5	684.9	704.7
52.5°	541.5	553.7	601.0	651.3	674.2
55°	506.4	515.6	564.4	617.8	642.2
57.5°	463.7	480.5	529.3	584.2	608.6
60°	416.4	437.8	491.2	550.6	575.1
62.5°	385.9	398.1	456.1	515.6	543.0
65°	341.7	356.9	417.9	479.0	507.9
67.5°	305.1	320.3	382.9	443.9	472.9
70°	265.4	280.7	346.3	407.3	436.2
72.5°	219.6	241.0	309.6	370.7	401.2
75°	183.0	202.9	270.0	331.0	355.4
77.5°	141.9	167.8	230.3	280.7	299.0
80°	105.2	131.2	187.6	224.2	241.0
82.5°	71.7	97.6	140.3	167.8	176.9
85°	42.7	61.0	90.0	105.2	103.7
87.5°	19.8	25.9	36.6	36.6	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)