

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: P309023

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP125-W2A-U-2700K**

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: P309023
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CP125-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 2926.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

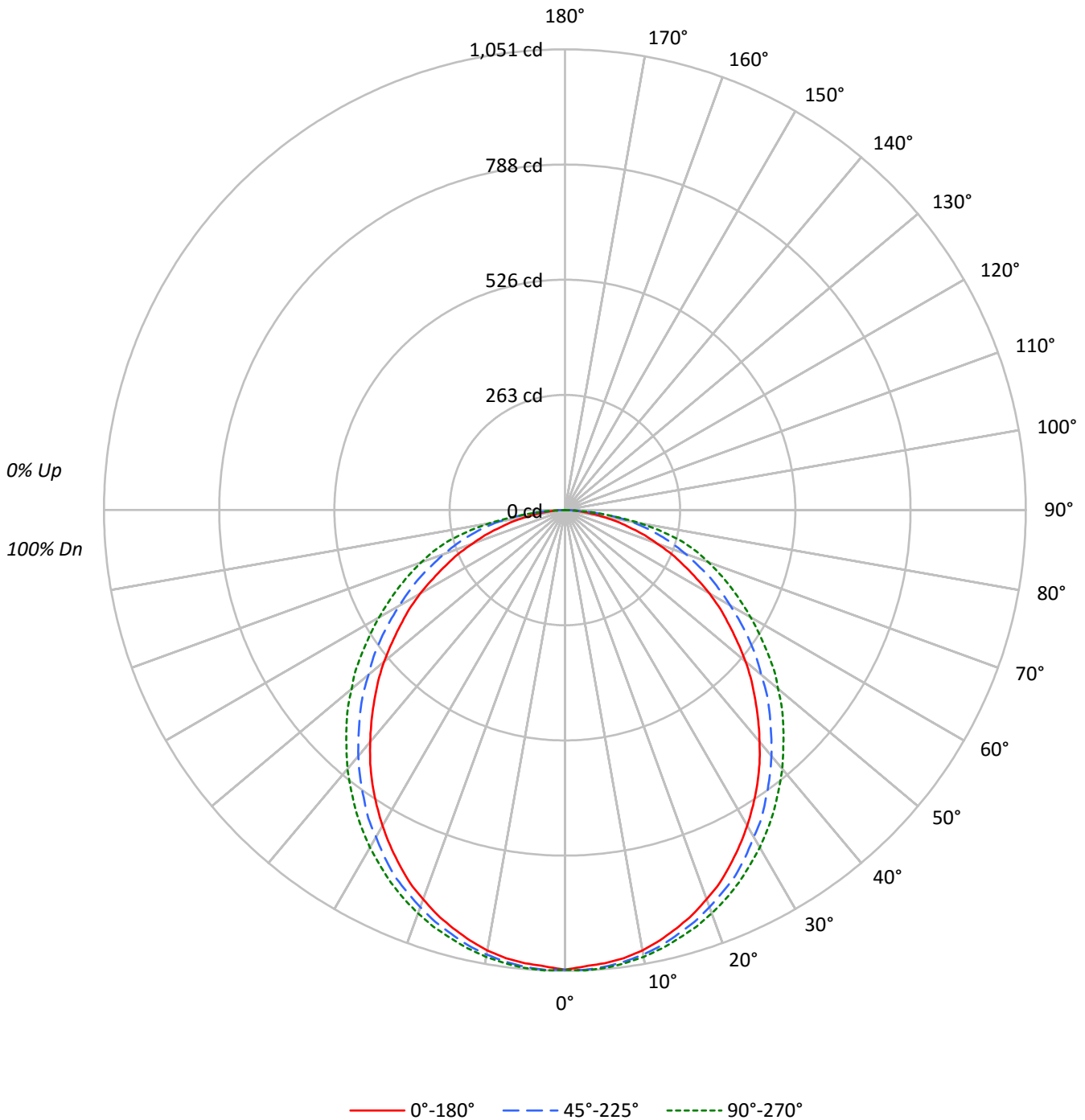
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2821	2821	2821
5°	2803	2825	2832
10°	2787	2813	2828
15°	2750	2788	2815
20°	2705	2760	2803
25°	2651	2732	2785
30°	2583	2677	2761
35°	2511	2628	2736
40°	2427	2575	2709
45°	2338	2515	2681
50°	2252	2446	2658
55°	2145	2402	2639
60°	2050	2344	2630
65°	1912	2330	2660
70°	1762	2309	2739
75°	1590	2342	2881
80°	1375	2411	2707
85°	1139	2022	2022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	3.4
10°-20°	282.2	9.6
20°-30°	422.2	14.4
30°-40°	500.0	17.1
40°-50°	509.6	17.4
50°-60°	456.7	15.6
60°-70°	357.6	12.2
70°-80°	230.6	7.9
80°-90°	68.1	2.3
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°	803.5	27.5
0°-40°	1303.5	44.5
0°-60°	2269.8	77.6
0°-90°	2926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2926.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1038	1040	1046	1047	1048	99
15°	987	992	1001	1009	1010	278
25°	893	901	920	932	938	411
35°	764	774	800	825	833	478
45°	614	628	661	695	704	474
55°	457	472	512	547	562	410
65°	300	318	366	401	418	298
75°	153	176	225	264	277	164
85°	37	50	66	66	66	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1041.7	1044.4	1049.8	1051.2	1051.2
5°	1037.6	1040.3	1045.7	1047.1	1048.5
7.5°	1030.7	1032.1	1038.9	1041.7	1043.0
10°	1019.8	1022.5	1029.4	1033.5	1034.8
12.5°	1004.8	1008.9	1017.1	1022.5	1023.9
15°	987.0	992.5	1000.7	1008.9	1010.3
17.5°	967.9	973.4	984.3	993.9	996.6
20°	944.7	951.5	963.8	974.8	978.9
22.5°	921.5	927.0	942.0	955.6	959.7
25°	892.8	901.0	920.1	932.4	937.9
27.5°	862.8	872.4	891.5	907.9	913.3
30°	831.4	841.0	861.4	881.9	888.7
32.5°	798.6	809.6	834.1	854.6	861.4
35°	764.5	774.1	800.0	824.6	832.8
37.5°	729.0	737.2	767.2	793.2	801.4
40°	690.8	701.7	733.1	763.1	771.3
42.5°	652.6	664.9	696.3	729.0	737.2
45°	614.3	628.0	660.8	694.9	704.4
47.5°	577.5	588.4	625.3	658.0	671.7
50°	537.9	548.8	584.3	621.2	634.8
52.5°	496.9	512.0	550.2	585.7	602.1
55°	457.3	472.4	512.0	547.4	562.5
57.5°	420.5	432.8	473.7	510.6	525.6
60°	380.9	391.8	435.5	475.1	488.7
62.5°	338.6	355.0	400.0	436.9	453.2
65°	300.3	318.1	365.9	401.4	417.8
67.5°	264.8	281.2	327.6	365.9	383.6
70°	223.9	245.7	293.5	331.7	348.1
72.5°	191.1	210.2	259.4	297.6	315.4
75°	152.9	176.1	225.3	263.5	277.1
77.5°	121.5	144.7	191.1	221.2	228.0
80°	88.7	111.9	155.6	170.7	174.7
82.5°	60.1	81.9	111.9	116.0	117.4
85°	36.9	50.5	65.5	65.5	65.5
87.5°	17.7	20.5	23.2	21.8	21.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)