

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: P309044

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP250-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: P309044
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3024.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

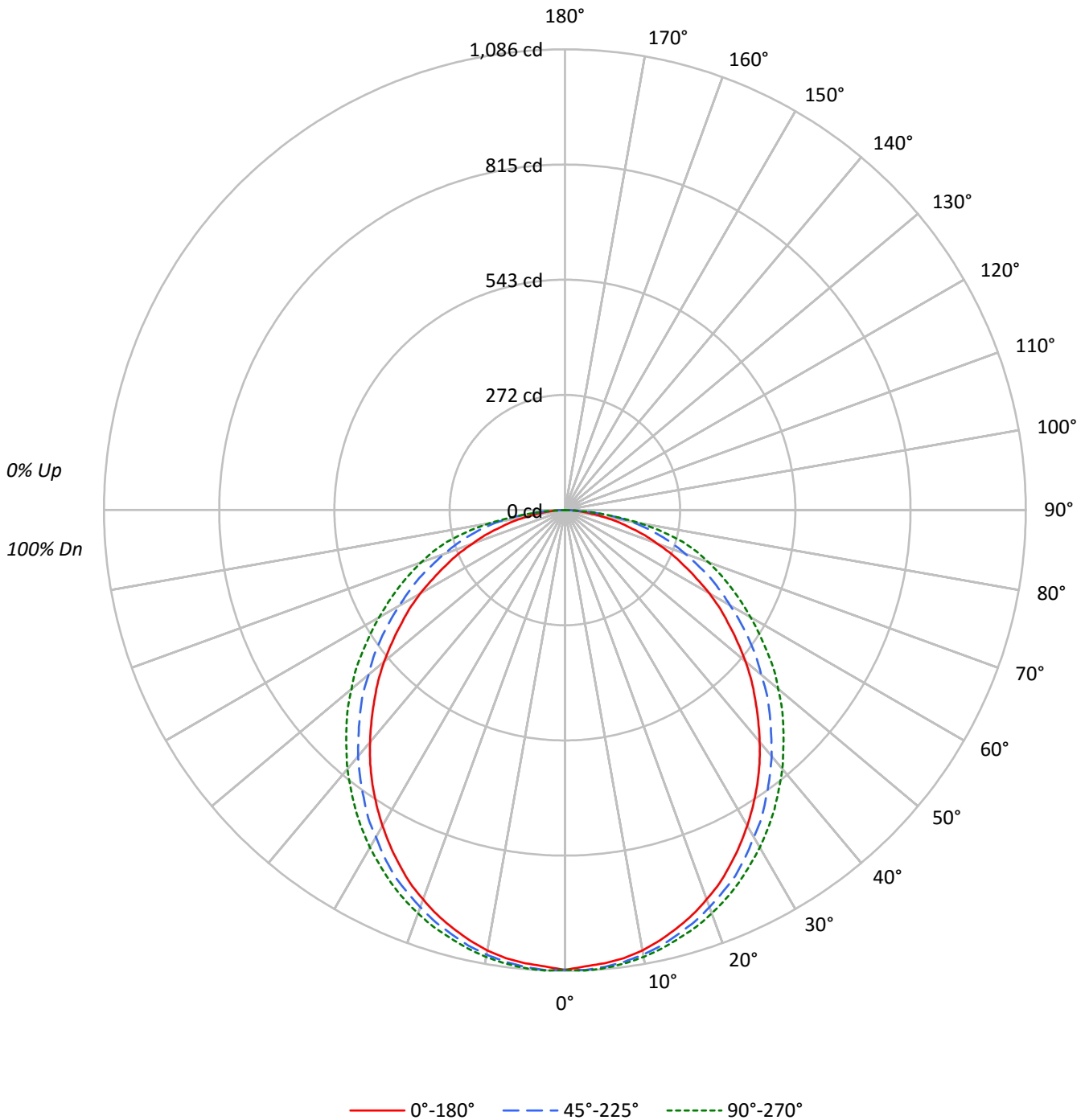
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2916	2916	2916
5°	2897	2920	2927
10°	2880	2907	2922
15°	2842	2881	2909
20°	2796	2853	2897
25°	2740	2824	2878
30°	2670	2766	2854
35°	2596	2716	2827
40°	2508	2662	2800
45°	2416	2599	2770
50°	2327	2528	2747
55°	2218	2482	2727
60°	2118	2422	2718
65°	1976	2408	2749
70°	1821	2386	2831
75°	1643	2420	2978
80°	1421	2492	2799
85°	1176	2090	2090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.5	3.4
10°-20°	291.6	9.6
20°-30°	436.3	14.4
30°-40°	516.7	17.1
40°-50°	526.6	17.4
50°-60°	472.0	15.6
60°-70°	369.5	12.2
70°-80°	238.3	7.9
80°-90°	70.4	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°	830.4	27.5
0°-40°	1347.2	44.5
0°-60°	2345.8	77.6
0°-90°	3024.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3024.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1072	1075	1081	1082	1084	102
15°	1020	1026	1034	1043	1044	288
25°	923	931	951	964	969	425
35°	790	800	827	852	861	494
45°	635	649	683	718	728	490
55°	473	488	529	566	581	424
65°	310	329	378	415	432	308
75°	158	182	233	272	286	169
85°	38	52	68	68	68	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1083.6	1083.6	1083.6	1083.6	1083.6
2.5°	1076.5	1079.4	1085.0	1086.4	1086.4
5°	1072.3	1075.1	1080.8	1082.2	1083.6
7.5°	1065.3	1066.7	1073.7	1076.5	1077.9
10°	1054.0	1056.8	1063.8	1068.1	1069.5
12.5°	1038.4	1042.7	1051.1	1056.8	1058.2
15°	1020.1	1025.7	1034.2	1042.7	1044.1
17.5°	1000.3	1006.0	1017.3	1027.2	1030.0
20°	976.4	983.4	996.1	1007.4	1011.6
22.5°	952.4	958.0	973.5	987.7	991.9
25°	922.7	931.2	951.0	963.7	969.3
27.5°	891.7	901.6	921.3	938.3	943.9
30°	859.3	869.1	890.3	911.5	918.5
32.5°	825.4	836.7	862.1	883.2	890.3
35°	790.1	800.0	826.8	852.2	860.7
37.5°	753.4	761.9	792.9	819.7	828.2
40°	713.9	725.2	757.7	788.7	797.2
42.5°	674.4	687.1	719.6	753.4	761.9
45°	634.9	649.0	682.9	718.2	728.0
47.5°	596.8	608.1	646.2	680.1	694.2
50°	555.9	567.2	603.9	642.0	656.1
52.5°	513.6	529.1	568.6	605.3	622.2
55°	472.7	488.2	529.1	565.8	581.3
57.5°	434.6	447.3	489.6	527.7	543.2
60°	393.6	404.9	450.1	491.0	505.1
62.5°	349.9	366.8	413.4	451.5	468.4
65°	310.4	328.7	378.1	414.8	431.7
67.5°	273.7	290.7	338.6	378.1	396.5
70°	231.4	254.0	303.3	342.9	359.8
72.5°	197.5	217.3	268.1	307.6	325.9
75°	158.0	182.0	232.8	272.3	286.4
77.5°	125.6	149.6	197.5	228.6	235.6
80°	91.7	115.7	160.8	176.4	180.6
82.5°	62.1	84.7	115.7	119.9	121.3
85°	38.1	52.2	67.7	67.7	67.7
87.5°	18.3	21.2	24.0	22.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)