

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: P309045

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP250-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: P309045  
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-4500K  
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**

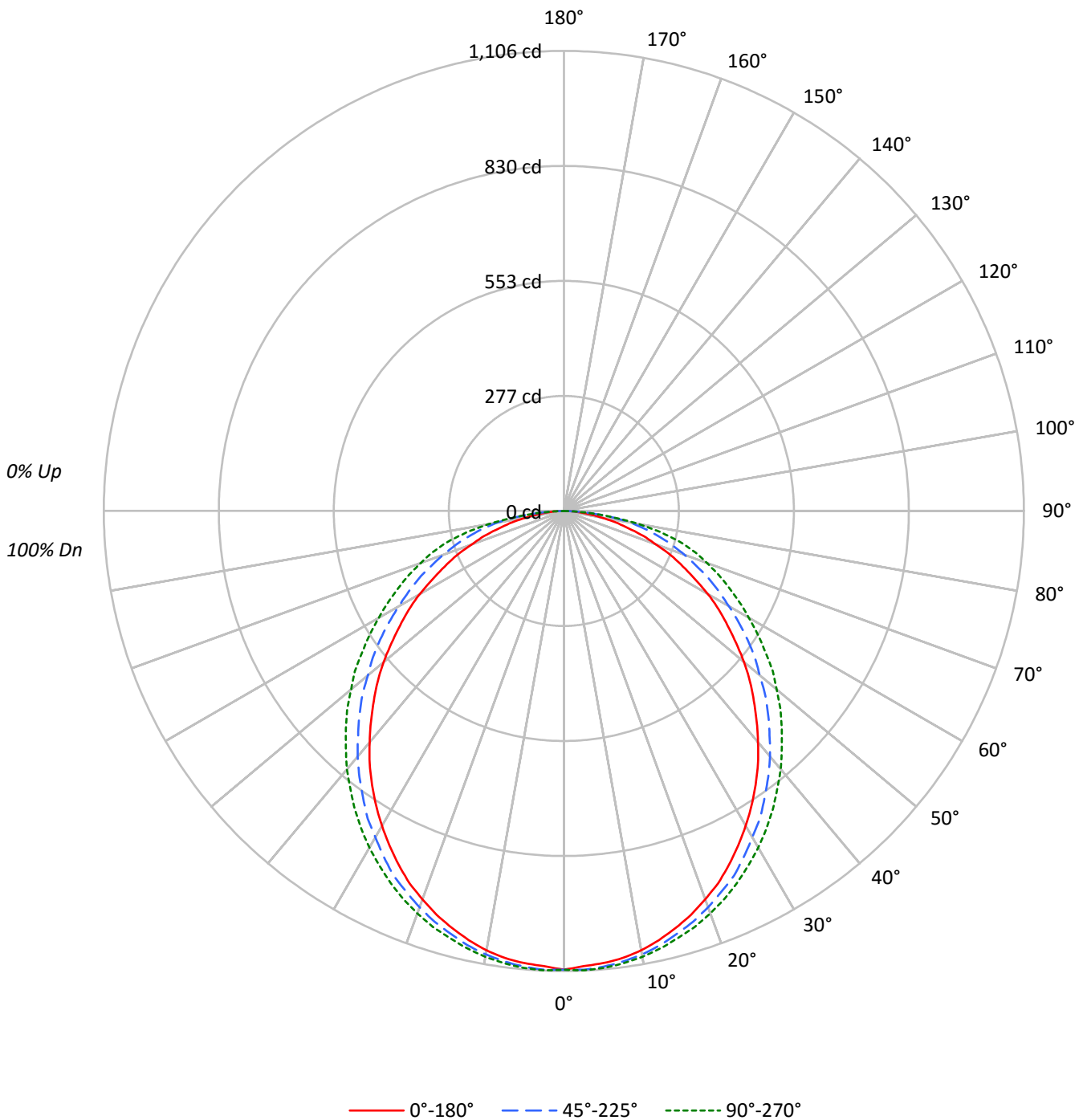
Lumens per Lamp: N/A  
Luminaire Lumens: 3077.0 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2967	2967	2967
5°	2947	2971	2978
10°	2930	2958	2973
15°	2892	2932	2960
20°	2845	2903	2948
25°	2788	2873	2928
30°	2717	2815	2904
35°	2641	2764	2877
40°	2552	2708	2849
45°	2458	2645	2819
50°	2368	2573	2795
55°	2256	2526	2775
60°	2155	2465	2766
65°	2011	2450	2797
70°	1852	2429	2880
75°	1672	2463	3030
80°	1446	2537	2848
85°	1198	2127	2127



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.3	3.4
10°-20°	296.7	9.6
20°-30°	444.0	14.4
30°-40°	525.8	17.1
40°-50°	535.8	17.4
50°-60°	480.3	15.6
60°-70°	376.0	12.2
70°-80°	242.5	7.9
80°-90°	71.6	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°	845.0	27.5
0°-40°	1370.8	44.5
0°-60°	2386.9	77.6
0°-90°	3077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3077.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1103	1103	1103	1103	1103	
5°	1091	1094	1100	1101	1103	104
15°	1038	1044	1052	1061	1062	293
25°	939	948	968	981	986	432
35°	804	814	841	867	876	502
45°	646	660	695	731	741	499
55°	481	497	538	576	592	431
65°	316	334	385	422	439	314
75°	161	185	237	277	291	172
85°	39	53	69	69	69	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1102.6	1102.6	1102.6	1102.6	1102.6
2.5°	1095.4	1098.3	1104.0	1105.5	1105.5
5°	1091.1	1094.0	1099.7	1101.1	1102.6
7.5°	1083.9	1085.4	1092.5	1095.4	1096.8
10°	1072.4	1075.3	1082.5	1086.8	1088.2
12.5°	1056.6	1061.0	1069.6	1075.3	1076.7
15°	1038.0	1043.7	1052.3	1061.0	1062.4
17.5°	1017.9	1023.6	1035.1	1045.2	1048.0
20°	993.5	1000.7	1013.6	1025.1	1029.4
22.5°	969.1	974.8	990.6	1005.0	1009.3
25°	938.9	947.5	967.6	980.6	986.3
27.5°	907.3	917.4	937.5	954.7	960.5
30°	874.3	884.4	905.9	927.4	934.6
32.5°	839.9	851.3	877.2	898.7	905.9
35°	804.0	814.0	841.3	867.1	875.8
37.5°	766.6	775.3	806.8	834.1	842.7
40°	726.4	737.9	770.9	802.5	811.1
42.5°	686.2	699.2	732.2	766.6	775.3
45°	646.0	660.4	694.9	730.7	740.8
47.5°	607.3	618.8	657.5	692.0	706.3
50°	565.6	577.1	614.5	653.2	667.6
52.5°	522.6	538.4	578.6	615.9	633.1
55°	480.9	496.7	538.4	575.7	591.5
57.5°	442.2	455.1	498.2	536.9	552.7
60°	400.5	412.0	458.0	499.6	514.0
62.5°	356.0	373.3	420.6	459.4	476.6
65°	315.8	334.5	384.8	422.1	439.3
67.5°	278.5	295.7	344.6	384.8	403.4
70°	235.4	258.4	308.7	348.9	366.1
72.5°	201.0	221.1	272.8	313.0	331.6
75°	160.8	185.2	236.9	277.1	291.4
77.5°	127.8	152.2	201.0	232.6	239.8
80°	93.3	117.7	163.7	179.5	183.8
82.5°	63.2	86.1	117.7	122.0	123.5
85°	38.8	53.1	68.9	68.9	68.9
87.5°	18.7	21.5	24.4	23.0	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)