

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: P309038

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-5500K**

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: P309038  
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-CP187-W2A-U-5500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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**

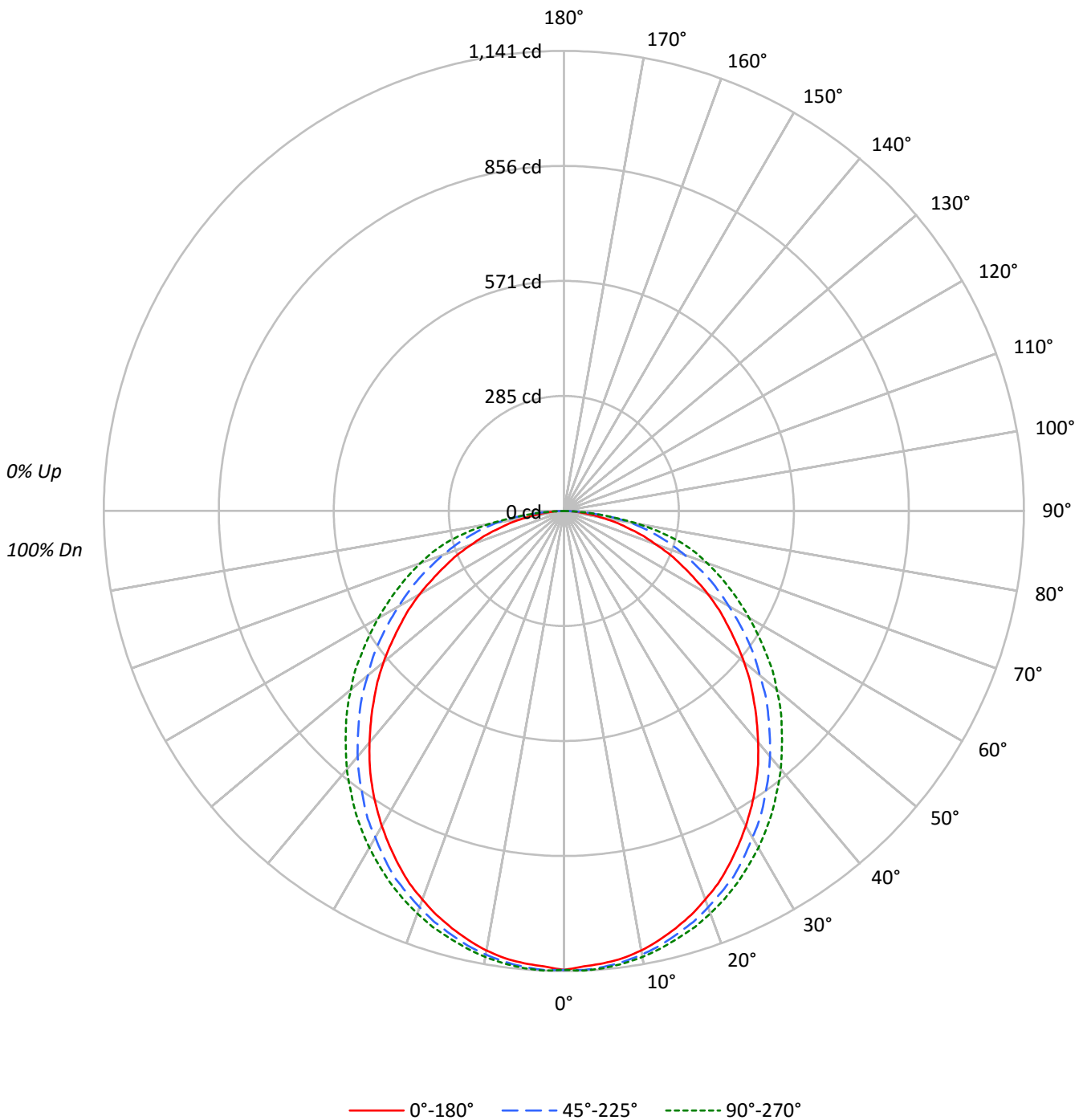
Lumens per Lamp: N/A  
Luminaire Lumens: 3176.0 lumens  
Efficiency: N/A  
Efficacy: 111.8 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	3063	3063	3063
5°	3042	3066	3074
10°	3025	3053	3069
15°	2985	3026	3055
20°	2936	2996	3043
25°	2877	2966	3023
30°	2804	2905	2998
35°	2726	2853	2969
40°	2634	2796	2941
45°	2538	2729	2910
50°	2444	2655	2885
55°	2329	2607	2864
60°	2225	2544	2855
65°	2076	2528	2887
70°	1912	2507	2973
75°	1726	2542	3127
80°	1492	2617	2940
85°	1235	2195	2195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.6	3.4
10°-20°	306.3	9.6
20°-30°	458.3	14.4
30°-40°	542.7	17.1
40°-50°	553.1	17.4
50°-60°	495.7	15.6
60°-70°	388.1	12.2
70°-80°	250.3	7.9
80°-90°	73.9	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°	872.2	27.5
0°-40°	1414.9	44.5
0°-60°	2463.7	77.6
0°-90°	3176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3176.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1138	1138	1138	1138	1138	
5°	1126	1129	1135	1137	1138	107
15°	1071	1077	1086	1095	1097	302
25°	969	978	999	1012	1018	446
35°	830	840	868	895	904	519
45°	667	682	717	754	765	515
55°	496	513	556	594	610	445
65°	326	345	397	436	453	324
75°	166	191	244	286	301	178
85°	40	55	71	71	71	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1138.1	1138.1	1138.1	<i>1138.1</i>	1138.1
2.5°	<i>1130.7</i>	<i>1133.6</i>	<i>1139.5</i>	<i>1141.0</i>	<i>1141.0</i>
5°	1126.2	1129.2	1135.1	<i>1136.6</i>	1138.1
7.5°	1118.8	1120.3	1127.7	<i>1130.7</i>	1132.1
10°	1106.9	1109.9	1117.3	<i>1121.8</i>	1123.2
12.5°	1090.6	1095.1	1104.0	<i>1109.9</i>	1111.4
15°	1071.4	1077.3	1086.2	<i>1095.1</i>	1096.6
17.5°	1050.6	1056.6	1068.4	<i>1078.8</i>	1081.7
20°	1025.4	1032.8	1046.2	<i>1058.0</i>	1062.5
22.5°	1000.2	1006.2	1022.5	<i>1037.3</i>	1041.7
25°	969.1	978.0	998.8	<i>1012.1</i>	1018.0
27.5°	936.5	946.9	967.6	<i>985.4</i>	991.4
30°	902.4	912.8	935.0	<i>957.3</i>	964.7
32.5°	866.9	878.7	905.4	<i>927.6</i>	935.0
35°	829.8	840.2	868.4	<i>895.0</i>	903.9
37.5°	791.3	800.2	832.8	<i>861.0</i>	869.8
40°	749.8	761.7	795.8	<i>828.4</i>	837.2
42.5°	708.3	721.7	755.7	<i>791.3</i>	800.2
45°	666.8	681.7	717.2	<i>754.3</i>	764.6
47.5°	626.8	638.7	678.7	<i>714.3</i>	729.1
50°	583.8	595.7	634.2	<i>674.2</i>	689.1
52.5°	539.4	555.7	597.2	<i>635.7</i>	653.5
55°	496.4	512.7	555.7	<i>594.2</i>	610.5
57.5°	456.4	469.7	514.2	<i>554.2</i>	570.5
60°	413.4	425.3	472.7	<i>515.7</i>	530.5
62.5°	367.5	385.3	434.2	<i>474.2</i>	492.0
65°	326.0	345.3	397.1	<i>435.7</i>	453.4
67.5°	287.5	305.3	355.6	<i>397.1</i>	416.4
70°	243.0	266.7	318.6	<i>360.1</i>	377.9
72.5°	207.5	228.2	281.6	<i>323.0</i>	342.3
75°	166.0	191.2	244.5	<i>286.0</i>	300.8
77.5°	131.9	157.1	207.5	<i>240.1</i>	247.5
80°	96.3	121.5	168.9	<i>185.2</i>	189.7
82.5°	65.2	88.9	121.5	<i>126.0</i>	127.4
85°	40.0	54.8	71.1	<i>71.1</i>	71.1
87.5°	19.3	22.2	25.2	<i>23.7</i>	23.7
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)