

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: P312988

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-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: P312988  
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-L83050-S-CP250-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 4500K 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**

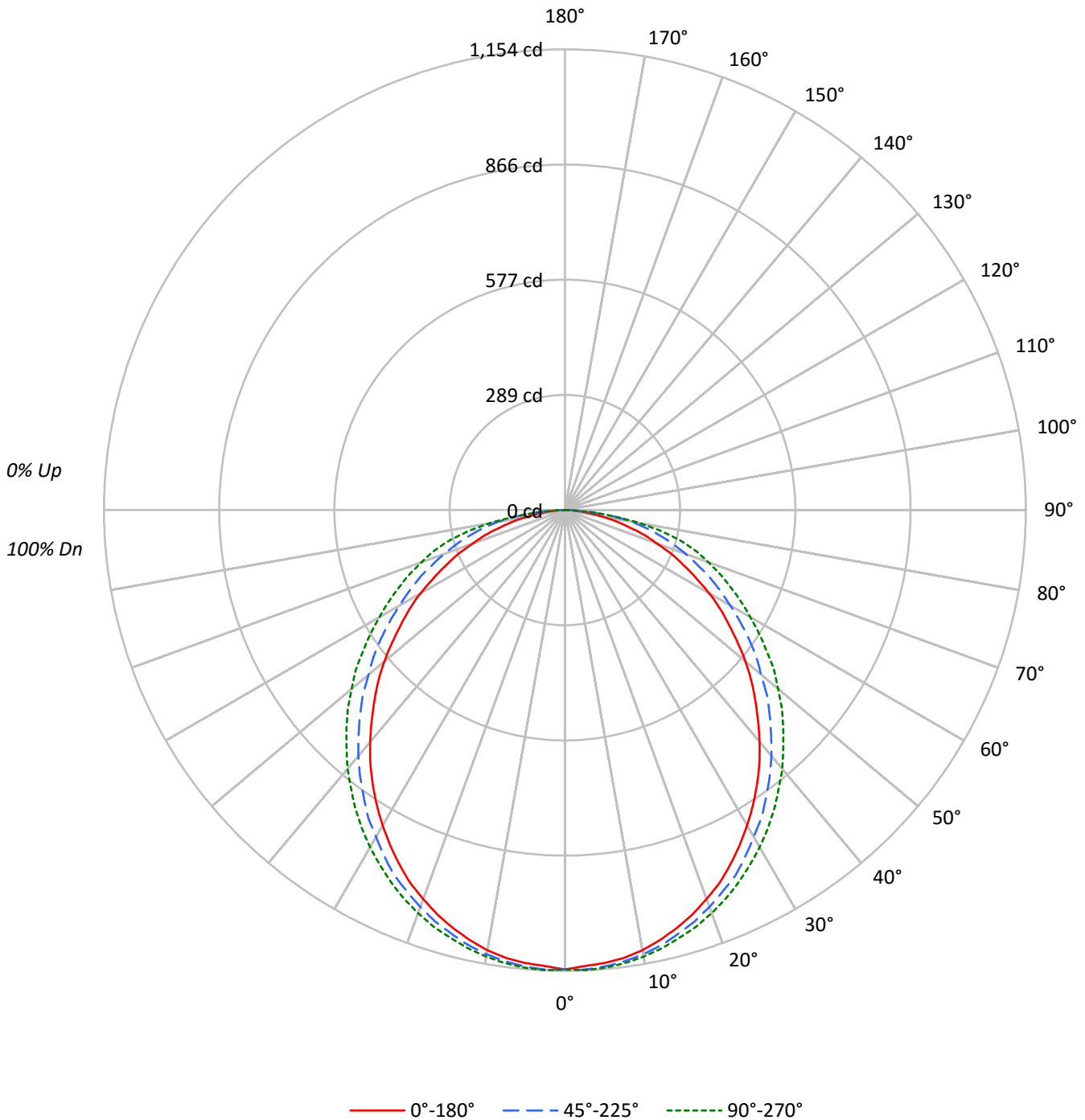
Lumens per Lamp: N/A  
Luminaire Lumens: 3211.0 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	3096	3096	3096
5°	3076	3100	3108
10°	3058	3087	3103
15°	3018	3059	3089
20°	2969	3029	3076
25°	2909	2998	3056
30°	2835	2938	3031
35°	2756	2884	3002
40°	2663	2826	2974
45°	2566	2759	2942
50°	2471	2684	2917
55°	2355	2636	2896
60°	2250	2572	2886
65°	2099	2557	2919
70°	1933	2534	3006
75°	1745	2570	3162
80°	1509	2647	2972
85°	1250	2220	2220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.8	3.4
10°-20°	309.7	9.6
20°-30°	463.3	14.4
30°-40°	548.7	17.1
40°-50°	559.2	17.4
50°-60°	501.2	15.6
60°-70°	392.4	12.2
70°-80°	253.0	7.9
80°-90°	74.8	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°	881.8	27.5
0°-40°	1430.5	44.5
0°-60°	2490.9	77.6
0°-90°	3211.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3211.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1139	1142	1148	1149	1151	108
15°	1083	1089	1098	1107	1109	305
25°	980	989	1010	1023	1029	451
35°	839	850	878	905	914	524
45°	674	689	725	763	773	521
55°	502	518	562	601	617	450
65°	330	349	402	440	458	327
75°	168	193	247	289	304	180
85°	40	55	72	72	72	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1150.6	1150.6	1150.6	1150.6	1150.6
2.5°	1143.1	1146.1	1152.1	1153.6	1153.6
5°	1138.6	1141.6	1147.6	1149.1	1150.6
7.5°	1131.1	1132.6	1140.1	1143.1	1144.6
10°	1119.1	1122.1	1129.6	1134.1	1135.6
12.5°	1102.7	1107.2	1116.1	1122.1	1123.6
15°	1083.2	1089.2	1098.2	1107.2	1108.7
17.5°	1062.2	1068.2	1080.2	1090.7	1093.7
20°	1036.7	1044.2	1057.7	1069.7	1074.2
22.5°	1011.3	1017.3	1033.7	1048.7	1053.2
25°	979.8	988.8	1009.8	1023.3	1029.2
27.5°	946.8	957.3	978.3	996.3	1002.3
30°	912.4	922.9	945.4	967.8	975.3
32.5°	876.4	888.4	915.4	937.9	945.4
35°	839.0	849.5	877.9	904.9	913.9
37.5°	800.0	809.0	842.0	870.4	879.4
40°	758.1	770.1	804.5	837.5	846.5
42.5°	716.1	729.6	764.1	800.0	809.0
45°	674.2	689.2	725.1	762.6	773.1
47.5°	633.7	645.7	686.2	722.1	737.1
50°	590.3	602.3	641.2	681.7	696.7
52.5°	545.3	561.8	603.8	642.7	660.7
55°	501.9	518.4	561.8	600.8	617.2
57.5°	461.4	474.9	519.9	560.3	576.8
60°	418.0	430.0	477.9	521.4	536.3
62.5°	371.5	389.5	439.0	479.4	497.4
65°	329.6	349.1	401.5	440.5	458.4
67.5°	290.6	308.6	359.6	401.5	421.0
70°	245.7	269.7	322.1	364.1	382.0
72.5°	209.7	230.7	284.7	326.6	346.1
75°	167.8	193.3	247.2	289.1	304.1
77.5°	133.3	158.8	209.7	242.7	250.2
80°	97.4	122.9	170.8	187.3	191.8
82.5°	65.9	89.9	122.9	127.3	128.8
85°	40.5	55.4	71.9	71.9	71.9
87.5°	19.5	22.5	25.5	24.0	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)