

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: P312838

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-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: P312838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
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-CP250-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3045.0 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

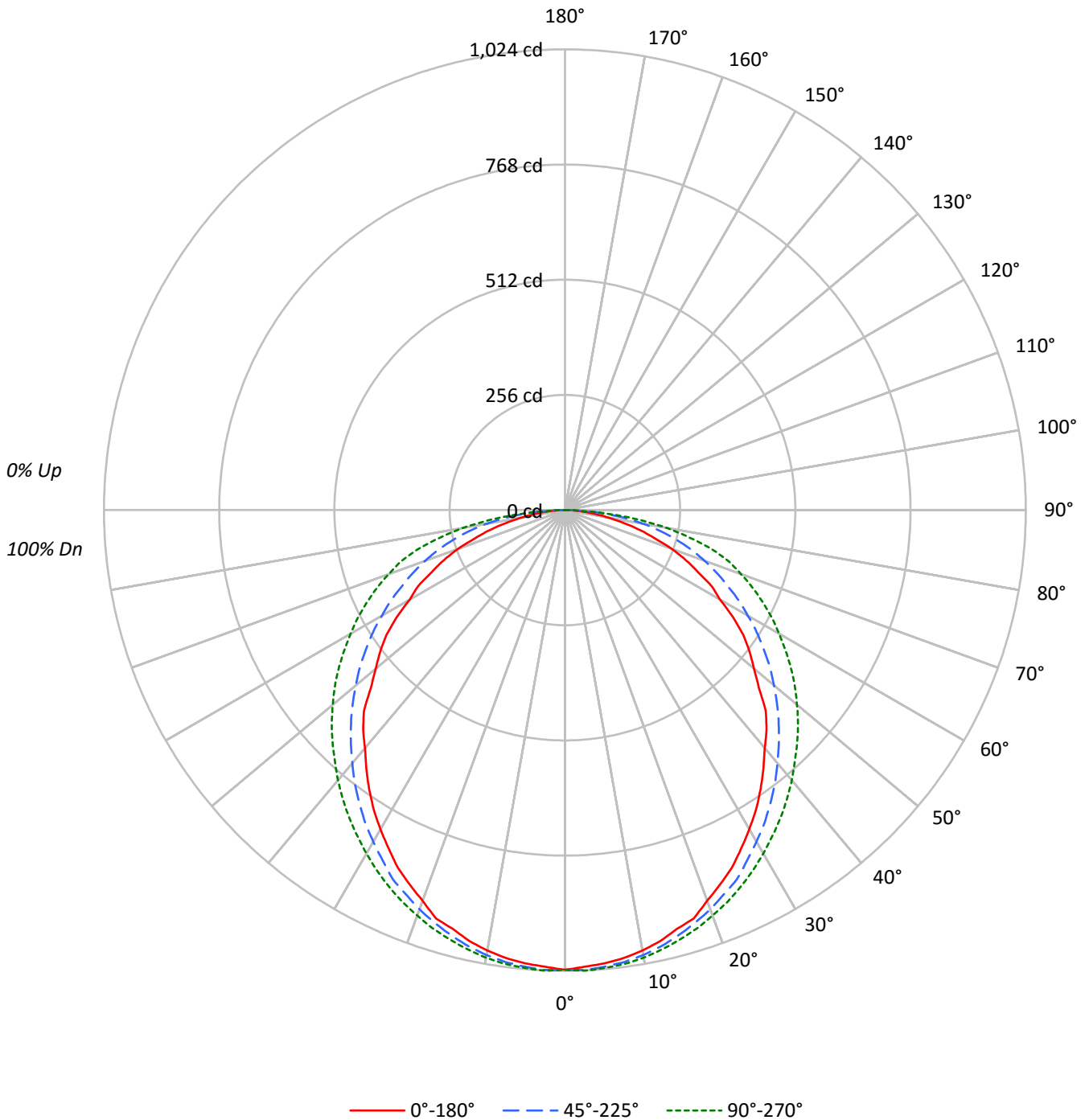
Input Watts (W): 29  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2749	2749	2749
5°	2732	2752	2760
10°	2716	2744	2760
15°	2684	2724	2753
20°	2646	2704	2746
25°	2605	2687	2744
30°	2545	2645	2740
35°	2489	2614	2743
40°	2427	2580	2754
45°	2401	2557	2778
50°	2294	2538	2819
55°	2270	2530	2879
60°	2141	2526	2957
65°	2079	2543	3090
70°	1995	2603	3279
75°	1818	2682	3531
80°	1559	2779	3569
85°	1260	2655	3060



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.7	3.2
10°-20°	275.8	9.1
20°-30°	415.1	13.6
30°-40°	498.1	16.4
40°-50°	520.7	17.1
50°-60°	485.2	15.9
60°-70°	398.0	13.1
70°-80°	268.2	8.8
80°-90°	87.4	2.9
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°	787.5	25.9
0°-40°	1285.6	42.2
0°-60°	2291.5	75.3
0°-90°	3045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3045.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1022	1022	1022	1022	1022	
5°	1011	1014	1019	1020	1022	96
15°	963	969	978	987	988	272
25°	877	883	905	918	924	403
35°	758	768	796	823	835	474
45°	631	635	672	713	730	482
55°	484	493	539	590	614	429
65°	326	341	399	458	485	325
75°	175	194	258	316	340	184
85°	41	58	86	101	99	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1021.6	1021.6	1021.6	1021.6	1021.6
2.5°	1015.8	1018.7	1023.1	1024.5	1024.5
5°	1011.4	1014.3	1018.7	1020.2	1021.6
7.5°	1004.1	1007.0	1012.9	1015.8	1017.3
10°	993.9	996.8	1004.1	1008.5	1010.0
12.5°	980.8	983.7	992.5	998.3	999.8
15°	963.3	969.2	977.9	986.6	988.1
17.5°	951.7	950.2	961.9	972.1	975.0
20°	924.0	931.3	944.4	956.0	959.0
22.5°	900.7	906.5	924.0	937.1	942.9
25°	877.3	883.2	905.0	918.1	924.0
27.5°	848.2	856.9	877.3	896.3	903.6
30°	819.0	827.8	851.1	873.0	881.7
32.5°	789.9	800.1	824.9	848.2	858.4
35°	757.8	768.0	795.7	823.4	835.1
37.5°	724.3	737.4	766.6	797.2	810.3
40°	690.8	703.9	734.5	769.5	784.1
42.5°	663.1	668.9	703.9	741.8	756.4
45°	631.0	635.4	671.9	712.7	730.1
47.5°	584.4	600.4	639.8	685.0	702.5
50°	548.0	565.5	606.3	654.4	673.3
52.5°	517.4	529.0	574.2	622.3	644.2
55°	483.9	492.6	539.2	590.2	613.6
57.5°	443.0	459.1	505.7	558.2	581.5
60°	397.9	418.3	469.3	526.1	549.4
62.5°	368.7	380.4	435.8	492.6	518.8
65°	326.5	341.0	399.3	457.6	485.3
67.5°	291.5	306.0	365.8	424.1	451.8
70°	253.6	268.2	330.8	389.1	416.8
72.5°	209.9	230.3	295.8	354.1	383.3
75°	174.9	193.8	258.0	316.3	339.6
77.5°	135.5	160.3	220.1	268.2	285.6
80°	100.6	125.3	179.3	214.2	230.3
82.5°	68.5	93.3	134.1	160.3	169.1
85°	40.8	58.3	86.0	100.6	99.1
87.5°	18.9	24.8	35.0	35.0	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)