

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: P312543

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CA08-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: P312543  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-39HE-UNV-L83050-HRP-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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**

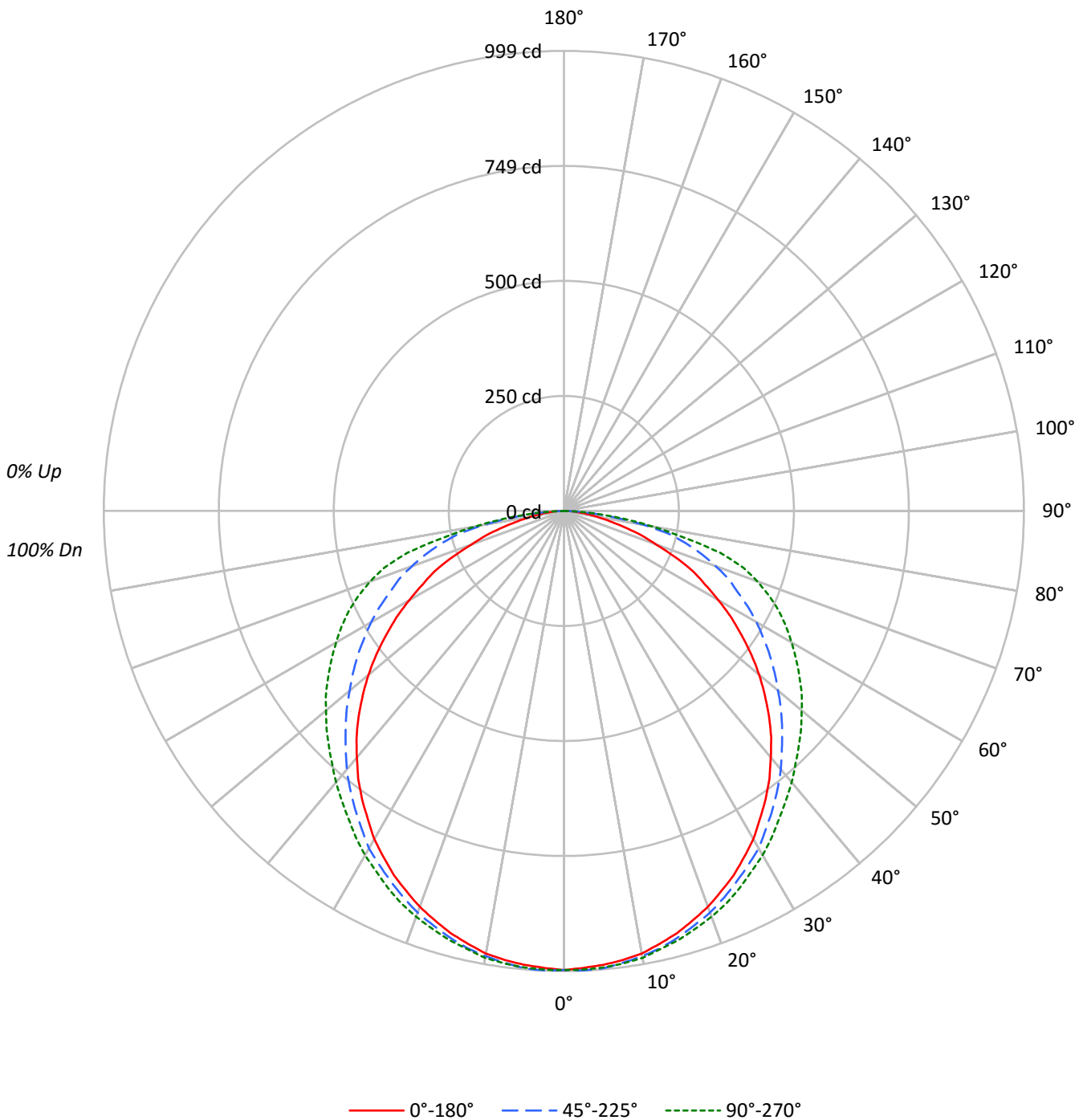
Lumens per Lamp: N/A  
Luminaire Lumens: 3027.0 lumens  
Efficiency: N/A  
Efficacy: 89.0 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	2682	2682	2682
5°	2672	2693	2687
10°	2666	2682	2692
15°	2644	2671	2686
20°	2619	2657	2685
25°	2591	2636	2682
30°	2557	2628	2682
35°	2509	2597	2679
40°	2455	2576	2703
45°	2398	2551	2747
50°	2318	2542	2822
55°	2213	2562	2929
60°	2086	2600	3073
65°	1969	2651	3283
70°	1683	2764	3515
75°	1410	2879	3653
80°	1155	2782	3048
85°	1003	2062	2242



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.5	3.1
10°-20°	270.2	8.9
20°-30°	409.5	13.5
30°-40°	494.5	16.3
40°-50°	519.6	17.2
50°-60°	488.9	16.2
60°-70°	407.7	13.5
70°-80°	270.1	8.9
80°-90°	72.0	2.4
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°	774.2	25.6
0°-40°	1268.7	41.9
0°-60°	2277.3	75.2
0°-90°	3027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3027.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	989	991	997	997	995	94
15°	949	953	959	962	964	268
25°	873	878	888	899	903	402
35°	764	771	790	808	815	478
45°	630	640	670	705	722	485
55°	472	493	546	602	624	422
65°	309	336	416	485	516	301
75°	136	189	277	334	351	147
85°	32	50	67	73	73	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	996.8	996.8	996.8	996.8	996.8
2.5°	992.9	994.8	998.7	998.7	996.8
5°	989.1	991.0	996.8	996.8	994.8
7.5°	983.4	985.3	989.1	992.9	991.0
10°	975.8	977.7	981.5	985.3	985.3
12.5°	962.4	964.3	971.9	973.8	973.8
15°	949.0	952.8	958.6	962.4	964.3
17.5°	931.8	935.7	943.3	950.9	950.9
20°	914.6	918.5	928.0	935.7	937.6
22.5°	893.6	899.4	908.9	918.5	922.3
25°	872.6	878.4	887.9	899.4	903.2
27.5°	847.8	853.5	866.9	880.3	882.2
30°	823.0	828.7	845.9	857.4	863.1
32.5°	792.4	800.1	817.3	834.4	840.2
35°	763.8	771.4	790.5	807.7	815.4
37.5°	733.2	740.9	761.9	782.9	792.4
40°	698.9	708.4	733.2	756.2	769.5
42.5°	666.4	676.0	700.8	731.3	744.7
45°	630.1	639.7	670.2	704.6	721.8
47.5°	591.9	603.4	639.7	681.7	698.9
50°	553.8	567.1	607.2	655.0	674.1
52.5°	513.7	530.8	576.7	628.2	651.1
55°	471.6	492.7	546.1	601.5	624.4
57.5°	431.5	450.6	513.7	572.8	597.7
60°	387.6	412.5	483.1	544.2	570.9
62.5°	345.6	372.4	450.6	515.6	544.2
65°	309.3	336.1	416.3	485.0	515.6
67.5°	261.6	297.9	387.6	452.6	483.1
70°	213.9	263.5	351.3	418.2	446.8
72.5°	177.6	225.3	315.1	381.9	408.6
75°	135.6	189.0	276.9	334.2	351.3
77.5°	101.2	156.6	236.8	265.4	267.3
80°	74.5	120.3	179.5	189.0	196.7
82.5°	51.6	84.0	116.5	127.9	131.8
85°	32.5	49.6	66.8	72.6	72.6
87.5°	17.2	19.1	22.9	22.9	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)