

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: P308807

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-W2A-U-2700K**

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: P308807  
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: 22FCZ2-39HE-UNV-L82765-CP187-W2A-U-2700K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

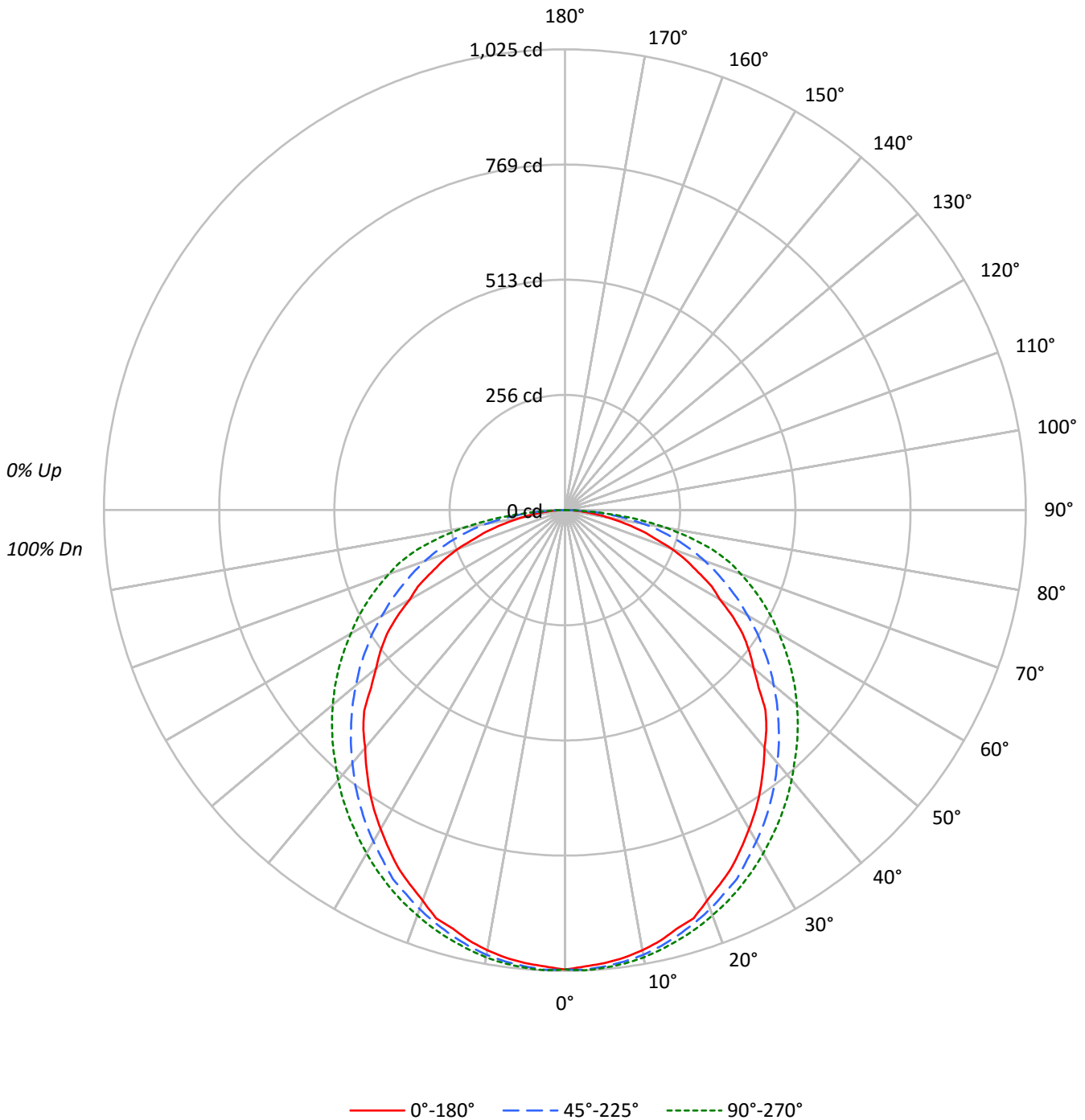
Lumens per Lamp: N/A  
Luminaire Lumens: 3046.0 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2750	2750	2750
5°	2733	2753	2761
10°	2717	2745	2761
15°	2684	2725	2754
20°	2647	2705	2747
25°	2606	2688	2744
30°	2546	2646	2741
35°	2490	2615	2744
40°	2427	2581	2755
45°	2402	2558	2780
50°	2295	2539	2820
55°	2271	2531	2880
60°	2142	2526	2958
65°	2080	2544	3091
70°	1996	2603	3280
75°	1818	2682	3532
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°	275.9	9.1
20°-30°	415.2	13.6
30°-40°	498.3	16.4
40°-50°	520.8	17.1
50°-60°	485.4	15.9
60°-70°	398.1	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°	787.8	25.9
0°-40°	1286.1	42.2
0°-60°	2292.3	75.3
0°-90°	3046.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3046.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1022	1022	1022	1022	1022	
5°	1012	1015	1019	1020	1022	96
15°	964	970	978	987	988	272
25°	878	884	905	918	924	403
35°	758	768	796	824	835	474
45°	631	636	672	713	730	482
55°	484	493	539	590	614	429
65°	327	341	400	458	486	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°	1022.0	1022.0	1022.0	1022.0	1022.0
2.5°	1016.1	1019.0	1023.4	1024.9	1024.9
5°	1011.8	1014.7	1019.0	1020.5	1022.0
7.5°	1004.5	1007.4	1013.2	1016.1	1017.6
10°	994.3	997.2	1004.5	1008.8	1010.3
12.5°	981.1	984.1	992.8	998.6	1000.1
15°	963.6	969.5	978.2	987.0	988.4
17.5°	952.0	950.5	962.2	972.4	975.3
20°	924.3	931.6	944.7	956.4	959.3
22.5°	901.0	906.8	924.3	937.4	943.2
25°	877.6	883.5	905.3	918.5	924.3
27.5°	848.5	857.2	877.6	896.6	903.9
30°	819.3	828.1	851.4	873.3	882.0
32.5°	790.2	800.4	825.1	848.5	858.7
35°	758.1	768.3	796.0	823.7	835.4
37.5°	724.6	737.7	766.8	797.4	810.6
40°	691.0	704.1	734.8	769.7	784.3
42.5°	663.3	669.2	704.1	742.1	756.6
45°	631.3	635.6	672.1	712.9	730.4
47.5°	584.6	600.6	640.0	685.2	702.7
50°	548.2	565.6	606.5	654.6	673.5
52.5°	517.5	529.2	574.4	622.5	644.4
55°	484.0	492.8	539.4	590.4	613.8
57.5°	443.2	459.2	505.9	558.4	581.7
60°	398.0	418.4	469.4	526.3	549.6
62.5°	368.8	380.5	435.9	492.8	519.0
65°	326.6	341.1	399.5	457.8	485.5
67.5°	291.6	306.2	365.9	424.2	451.9
70°	253.7	268.2	330.9	389.2	416.9
72.5°	209.9	230.3	295.9	354.3	383.4
75°	174.9	193.9	258.0	316.4	339.7
77.5°	135.6	160.4	220.1	268.2	285.7
80°	100.6	125.4	179.3	214.3	230.3
82.5°	68.5	93.3	134.1	160.4	169.1
85°	40.8	58.3	86.0	100.6	99.1
87.5°	19.0	24.8	35.0	35.0	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)