

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: P308764

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CP187-W2A-U-3500K**

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: P308764  
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-L82765-CP187-W2A-U-3500K  
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**

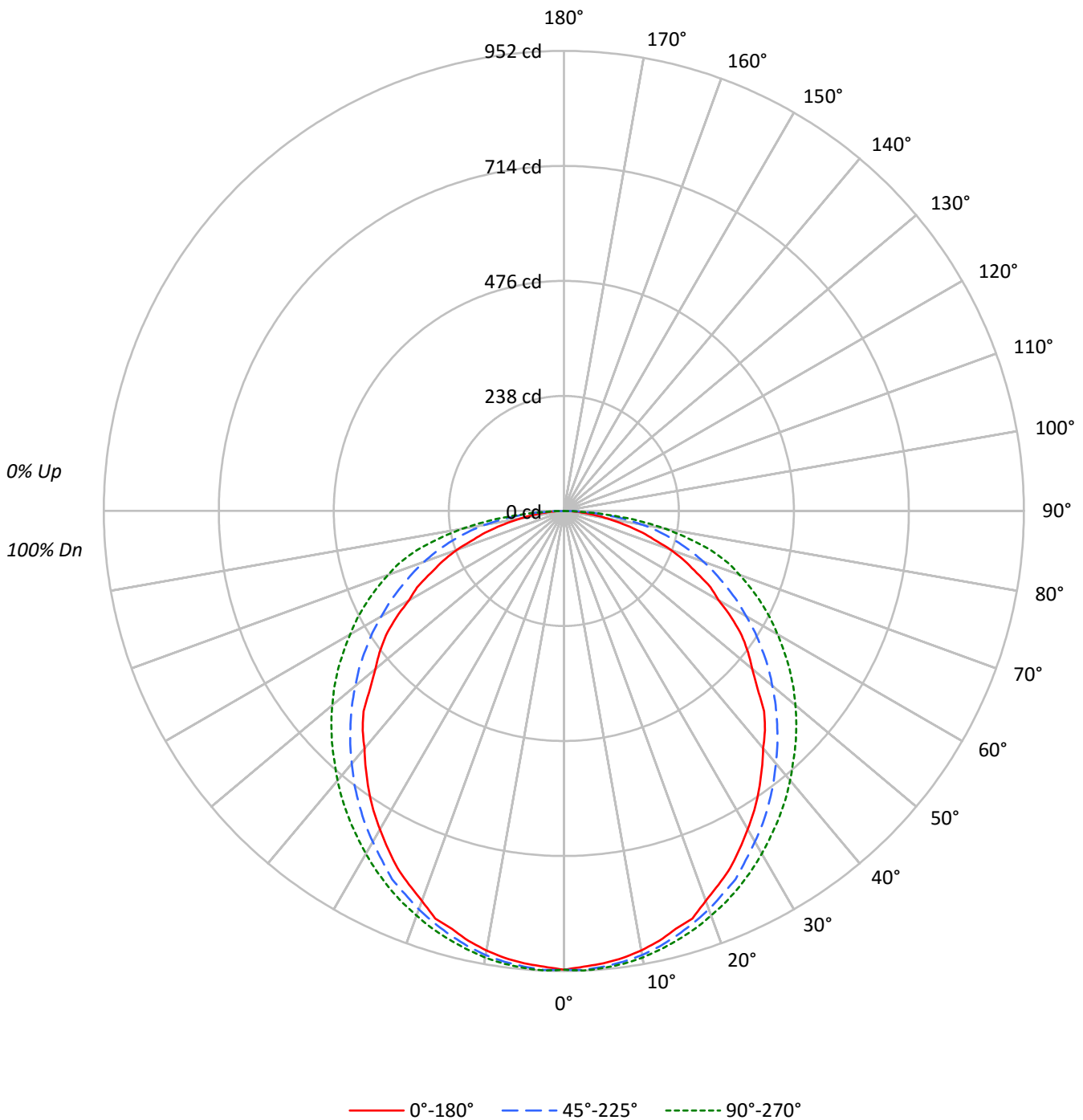
Lumens per Lamp: N/A  
Luminaire Lumens: 2829.0 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2554	2554	2554
5°	2538	2556	2564
10°	2523	2549	2564
15°	2493	2531	2557
20°	2458	2513	2551
25°	2420	2496	2549
30°	2364	2457	2545
35°	2313	2429	2549
40°	2255	2397	2559
45°	2231	2375	2582
50°	2131	2358	2619
55°	2109	2350	2674
60°	1989	2347	2747
65°	1931	2362	2871
70°	1854	2419	3046
75°	1690	2492	3280
80°	1447	2580	3315
85°	1170	2467	2844



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.8	3.2
10°-20°	256.2	9.1
20°-30°	385.6	13.6
30°-40°	462.8	16.4
40°-50°	483.7	17.1
50°-60°	450.8	15.9
60°-70°	369.7	13.1
70°-80°	249.1	8.8
80°-90°	81.1	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°	731.6	25.9
0°-40°	1194.4	42.2
0°-60°	2129.0	75.3
0°-90°	2829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2829.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	940	942	946	948	949	89
15°	895	900	908	917	918	253
25°	815	820	841	853	858	375
35°	704	714	739	765	776	440
45°	586	590	624	662	678	448
55°	450	458	501	548	570	398
65°	303	317	371	425	451	302
75°	162	180	240	294	316	171
85°	38	54	80	93	92	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	949.2	949.2	949.2	949.2	949.2
2.5°	943.7	946.4	950.5	951.9	951.9
5°	939.7	942.4	946.4	947.8	949.2
7.5°	932.9	935.6	941.0	943.7	945.1
10°	923.4	926.1	932.9	937.0	938.3
12.5°	911.2	913.9	922.1	927.5	928.8
15°	895.0	900.4	908.5	916.7	918.0
17.5°	884.2	882.8	893.6	903.1	905.8
20°	858.4	865.2	877.4	888.2	890.9
22.5°	836.8	842.2	858.4	870.6	876.0
25°	815.1	820.5	840.8	853.0	858.4
27.5°	788.0	796.2	815.1	832.7	839.5
30°	760.9	769.1	790.7	811.0	819.2
32.5°	733.9	743.3	766.4	788.0	797.5
35°	704.1	713.6	739.3	765.0	775.8
37.5°	672.9	685.1	712.2	740.6	752.8
40°	641.8	654.0	682.4	714.9	728.5
42.5°	616.1	621.5	654.0	689.2	702.7
45°	586.3	590.3	624.2	662.1	678.4
47.5°	543.0	557.8	594.4	636.4	652.6
50°	509.1	525.4	563.3	607.9	625.5
52.5°	480.7	491.5	533.5	578.2	598.5
55°	449.5	457.7	501.0	548.4	570.0
57.5°	411.6	426.5	469.8	518.6	540.2
60°	369.6	388.6	436.0	488.8	510.5
62.5°	342.6	353.4	404.8	457.7	482.0
65°	303.3	316.8	371.0	425.2	450.9
67.5°	270.8	284.3	339.9	394.0	419.7
70°	235.6	249.1	307.4	361.5	387.2
72.5°	195.0	213.9	274.9	329.0	356.1
75°	162.5	180.1	239.7	293.8	315.5
77.5°	125.9	148.9	204.5	249.1	265.4
80°	93.4	116.4	166.5	199.0	213.9
82.5°	63.6	86.7	124.6	148.9	157.1
85°	37.9	54.2	79.9	93.4	92.1
87.5°	17.6	23.0	32.5	32.5	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)