

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: P308993

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CP187-W2A-U-5500K**

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: P308993  
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: 22FCZ2-29HE-UNV-L82765-S-CP187-W2A-U-5500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

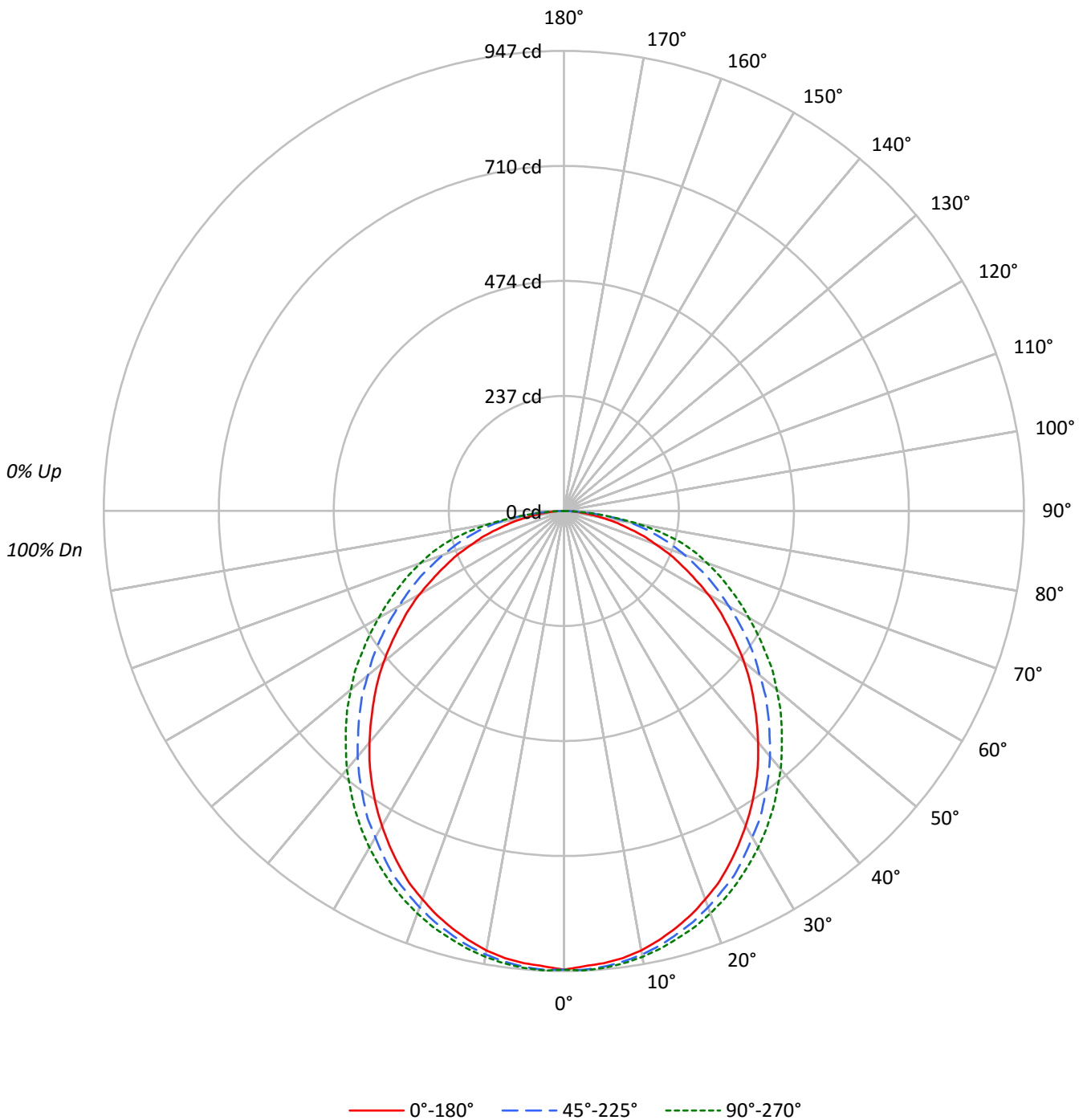
Lumens per Lamp: N/A  
Luminaire Lumens: 2635.0 lumens  
Efficiency: N/A  
Efficacy: 114.6 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2541	2541	2541
5°	2524	2544	2551
10°	2510	2533	2546
15°	2476	2511	2535
20°	2436	2486	2524
25°	2387	2460	2508
30°	2326	2411	2487
35°	2262	2367	2464
40°	2185	2319	2440
45°	2105	2264	2414
50°	2028	2203	2393
55°	1932	2163	2376
60°	1846	2111	2369
65°	1722	2098	2395
70°	1586	2079	2467
75°	1432	2110	2595
80°	1238	2173	2439
85°	1025	1822	1822



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	3.4
10°-20°	254.1	9.6
20°-30°	380.2	14.4
30°-40°	450.3	17.1
40°-50°	458.9	17.4
50°-60°	411.3	15.6
60°-70°	322.0	12.2
70°-80°	207.6	7.9
80°-90°	61.3	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°	723.6	27.5
0°-40°	1173.9	44.5
0°-60°	2044.0	77.6
0°-90°	2635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2635.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	934	937	942	943	944	89
15°	889	894	901	908	910	251
25°	804	811	829	840	845	370
35°	688	697	720	743	750	430
45°	553	566	595	626	634	427
55°	412	425	461	493	506	369
65°	270	286	330	362	376	269
75°	138	159	203	237	250	148
85°	33	46	59	59	59	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	944.2	944.2	944.2	944.2	944.2
2.5°	938.1	940.5	945.4	946.7	946.7
5°	934.4	936.8	941.7	943.0	944.2
7.5°	928.2	929.4	935.6	938.1	939.3
10°	918.4	920.8	927.0	930.7	931.9
12.5°	904.9	908.5	915.9	920.8	922.1
15°	888.9	893.8	901.2	908.5	909.8
17.5°	871.7	876.6	886.4	895.0	897.5
20°	850.8	856.9	868.0	877.8	881.5
22.5°	829.9	834.8	848.3	860.6	864.3
25°	804.0	811.4	828.6	839.7	844.6
27.5°	777.0	785.6	802.8	817.6	822.5
30°	748.7	757.3	775.8	794.2	800.4
32.5°	719.2	729.1	751.2	769.6	775.8
35°	688.5	697.1	720.4	742.6	750.0
37.5°	656.5	663.9	690.9	714.3	721.7
40°	622.1	631.9	660.2	687.3	694.6
42.5°	587.7	598.7	627.0	656.5	663.9
45°	553.2	565.5	595.0	625.8	634.4
47.5°	520.0	529.9	563.1	592.6	604.9
50°	484.4	494.2	526.2	559.4	571.7
52.5°	447.5	461.0	495.5	527.4	542.2
55°	411.9	425.4	461.0	493.0	506.5
57.5°	378.7	389.7	426.6	459.8	473.3
60°	343.0	352.8	392.2	427.8	440.1
62.5°	304.9	319.7	360.2	393.4	408.2
65°	270.5	286.5	329.5	361.5	376.2
67.5°	238.5	253.3	295.1	329.5	345.5
70°	201.6	221.3	264.3	298.8	313.5
72.5°	172.1	189.3	233.6	268.0	284.0
75°	137.7	158.6	202.9	237.3	249.6
77.5°	109.4	130.3	172.1	199.2	205.3
80°	79.9	100.8	140.2	153.7	157.4
82.5°	54.1	73.8	100.8	104.5	105.7
85°	33.2	45.5	59.0	59.0	59.0
87.5°	16.0	18.4	20.9	19.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)