

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: P308725

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-W2A-U-6500K**

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: P308725  
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: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-6500K  
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**

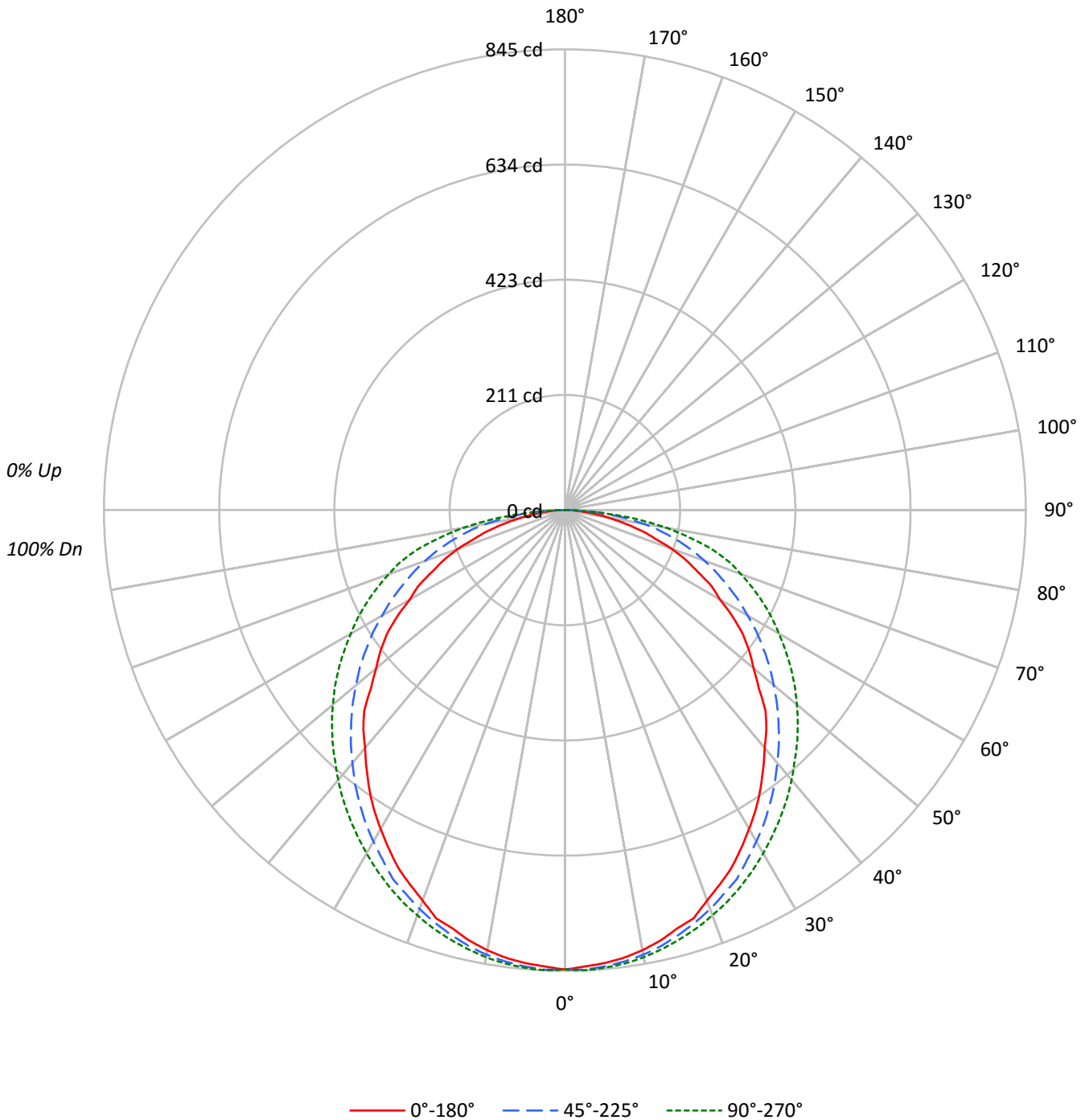
Lumens per Lamp: N/A  
Luminaire Lumens: 2511.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2267	2267	2267
5°	2253	2269	2276
10°	2240	2263	2276
15°	2213	2247	2270
20°	2182	2230	2265
25°	2148	2216	2262
30°	2099	2181	2259
35°	2053	2156	2262
40°	2001	2128	2271
45°	1980	2108	2291
50°	1892	2093	2324
55°	1872	2086	2374
60°	1766	2083	2439
65°	1714	2097	2548
70°	1645	2146	2704
75°	1499	2211	2911
80°	1285	2290	2943
85°	1041	2189	2523



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.7	3.2
10°-20°	227.4	9.1
20°-30°	342.3	13.6
30°-40°	410.8	16.4
40°-50°	429.3	17.1
50°-60°	400.1	15.9
60°-70°	328.2	13.1
70°-80°	221.1	8.8
80°-90°	72.0	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°	649.4	25.9
0°-40°	1060.2	42.2
0°-60°	1889.7	75.3
0°-90°	2511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2511.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	834	836	840	841	842	79
15°	794	799	806	814	815	224
25°	724	728	746	757	762	333
35°	625	633	656	679	689	391
45°	520	524	554	588	602	398
55°	399	406	445	487	506	354
65°	269	281	329	377	400	268
75°	144	160	213	261	280	152
85°	34	48	71	83	82	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	842.5	842.5	842.5	842.5	842.5
2.5°	837.7	840.1	843.7	844.9	844.9
5°	834.0	836.5	840.1	841.3	842.5
7.5°	828.0	830.4	835.3	837.7	838.9
10°	819.6	822.0	828.0	831.6	832.8
12.5°	808.8	811.2	818.4	823.2	824.4
15°	794.4	799.2	806.4	813.6	814.8
17.5°	784.8	783.6	793.2	801.6	804.0
20°	761.9	768.0	778.8	788.4	790.8
22.5°	742.7	747.5	761.9	772.8	777.6
25°	723.5	728.3	746.3	757.1	761.9
27.5°	699.4	706.7	723.5	739.1	745.1
30°	675.4	682.6	701.9	719.9	727.1
32.5°	651.4	659.8	680.2	699.4	707.9
35°	624.9	633.3	656.2	679.0	688.6
37.5°	597.3	608.1	632.1	657.4	668.2
40°	569.7	580.5	605.7	634.6	646.6
42.5°	546.8	551.6	580.5	611.7	623.7
45°	520.4	524.0	554.0	587.7	602.1
47.5°	481.9	495.1	527.6	564.8	579.3
50°	451.9	466.3	499.9	539.6	555.2
52.5°	426.6	436.3	473.5	513.2	531.2
55°	399.0	406.2	444.7	486.7	506.0
57.5°	365.3	378.6	417.0	460.3	479.5
60°	328.1	344.9	387.0	433.8	453.1
62.5°	304.1	313.7	359.3	406.2	427.8
65°	269.2	281.2	329.3	377.4	400.2
67.5°	240.4	252.4	301.7	349.7	372.6
70°	209.1	221.1	272.8	320.9	343.7
72.5°	173.1	189.9	244.0	292.0	316.1
75°	144.2	159.8	212.7	260.8	280.0
77.5°	111.8	132.2	181.5	221.1	235.6
80°	82.9	103.4	147.8	176.7	189.9
82.5°	56.5	76.9	110.6	132.2	139.4
85°	33.7	48.1	70.9	82.9	81.7
87.5°	15.6	20.4	28.8	28.8	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)