

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: P308720

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-W2A-U-4000K**

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: P308720  
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-4000K  
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**

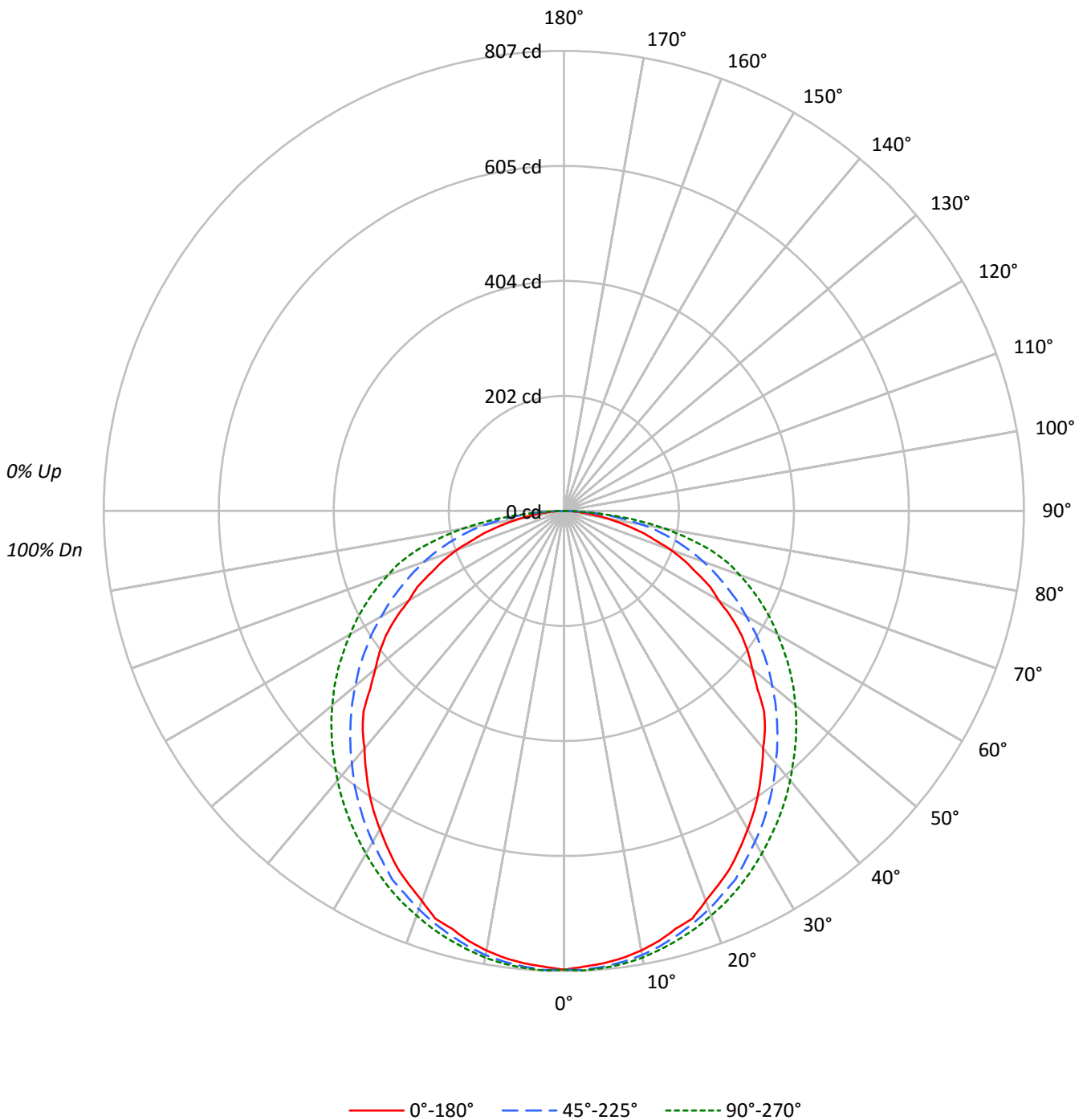
Lumens per Lamp: N/A  
Luminaire Lumens: 2398.0 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P308720

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P308720

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-4000K

**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°	2165	2165	2165
5°	2152	2167	2173
10°	2139	2161	2173
15°	2113	2145	2168
20°	2084	2130	2163
25°	2051	2116	2161
30°	2004	2083	2158
35°	1961	2059	2160
40°	1911	2032	2169
45°	1891	2014	2188
50°	1806	1999	2220
55°	1787	1993	2267
60°	1686	1989	2329
65°	1637	2003	2434
70°	1571	2050	2582
75°	1432	2112	2780
80°	1227	2188	2810
85°	991	2090	2408



TEST NUMBER: P308720

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.1	3.2
10°-20°	217.2	9.1
20°-30°	326.9	13.6
30°-40°	392.3	16.4
40°-50°	410.0	17.1
50°-60°	382.1	15.9
60°-70°	313.4	13.1
70°-80°	211.2	8.8
80°-90°	68.8	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°	620.2	25.9
0°-40°	1012.5	42.2
0°-60°	1804.6	75.3
0°-90°	2398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2398.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	796	799	802	803	804	76
15°	759	763	770	777	778	214
25°	691	696	713	723	728	318
35°	597	605	627	648	658	373
45°	497	500	529	561	575	380
55°	381	388	425	465	483	338
65°	257	269	314	360	382	256
75°	138	153	203	249	267	145
85°	32	46	68	79	78	38
90°	0	0	0	0	0	



TEST NUMBER: P308720

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	804.5	804.5	804.5	804.5	804.5
2.5°	800.0	802.3	805.7	806.8	806.8
5°	796.5	798.8	802.3	803.4	804.5
7.5°	790.8	793.1	797.7	800.0	801.1
10°	782.7	785.0	790.8	794.2	795.4
12.5°	772.4	774.7	781.6	786.2	787.3
15°	758.6	763.2	770.1	777.0	778.2
17.5°	749.5	748.3	757.5	765.5	767.8
20°	727.7	733.4	743.7	752.9	755.2
22.5°	709.3	713.9	727.7	738.0	742.6
25°	690.9	695.5	712.7	723.1	727.7
27.5°	668.0	674.9	690.9	705.8	711.6
30°	645.0	651.9	670.3	687.5	694.4
32.5°	622.1	630.1	649.6	668.0	676.0
35°	596.8	604.8	626.7	648.5	657.6
37.5°	570.4	580.7	603.7	627.8	638.1
40°	544.0	554.3	578.4	606.0	617.5
42.5°	522.2	526.8	554.3	584.2	595.7
45°	497.0	500.4	529.1	561.2	575.0
47.5°	460.2	472.9	503.8	539.4	553.2
50°	431.5	445.3	477.5	515.3	530.2
52.5°	407.4	416.6	452.2	490.1	507.3
55°	381.0	387.9	424.7	464.8	483.2
57.5°	348.9	361.5	398.3	439.6	457.9
60°	313.3	329.4	369.6	414.3	432.7
62.5°	290.4	299.6	343.2	387.9	408.6
65°	257.1	268.6	314.5	360.4	382.2
67.5°	229.5	241.0	288.1	334.0	355.8
70°	199.7	211.2	260.5	306.4	328.2
72.5°	165.3	181.3	233.0	278.9	301.8
75°	137.7	152.6	203.1	249.1	267.4
77.5°	106.7	126.2	173.3	211.2	225.0
80°	79.2	98.7	141.2	168.7	181.3
82.5°	53.9	73.5	105.6	126.2	133.1
85°	32.1	45.9	67.7	79.2	78.0
87.5°	14.9	19.5	27.5	27.5	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)