

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: P308967

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P308967  
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-CA08-W2A-U-5700K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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**

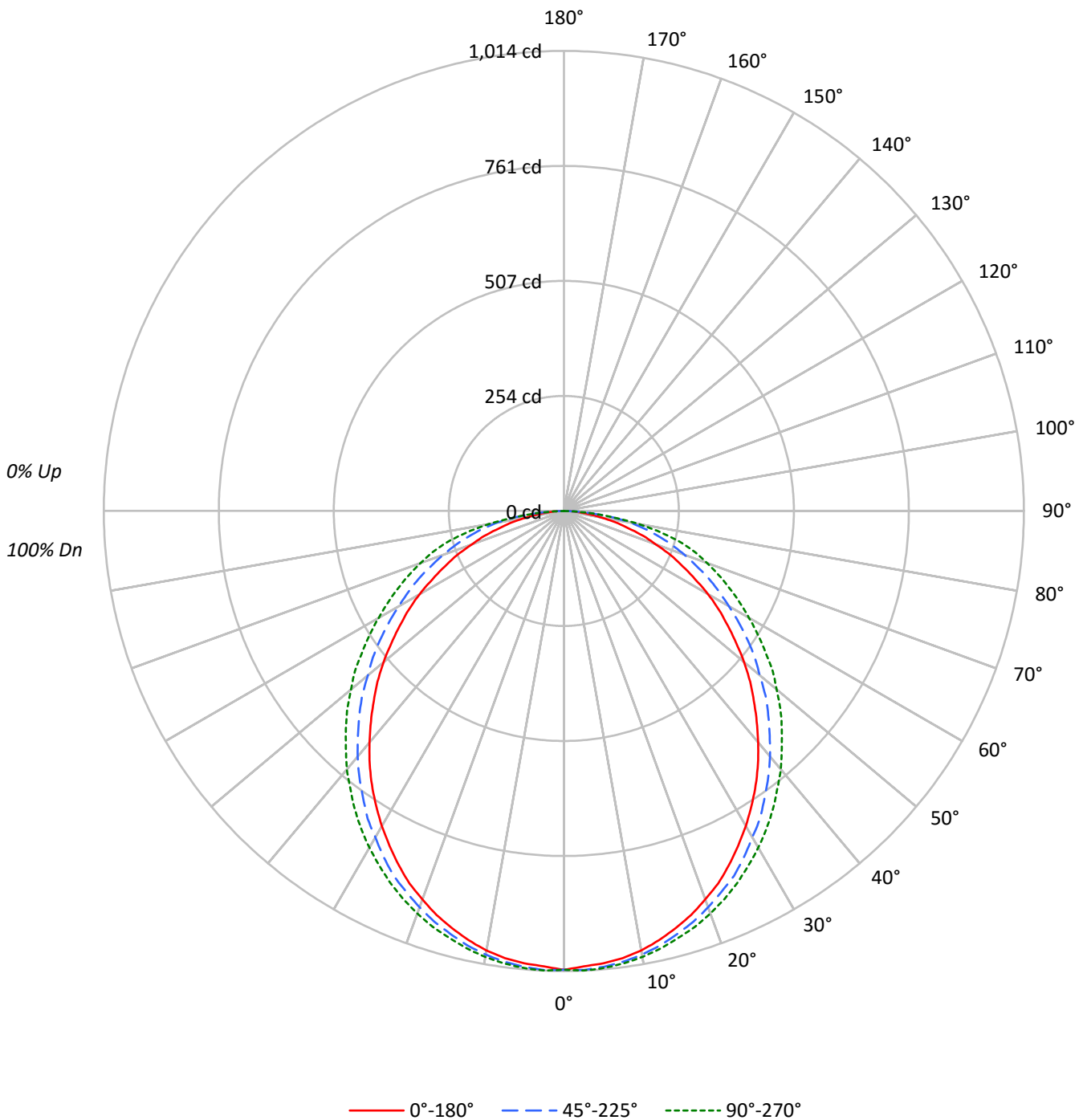
Lumens per Lamp: N/A  
Luminaire Lumens: 2822.0 lumens  
Efficiency: N/A  
Efficacy: 122.7 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P308967

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P308967

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-5700K

**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°	2721	2721	2721
5°	2703	2724	2732
10°	2688	2713	2727
15°	2652	2689	2714
20°	2609	2662	2704
25°	2557	2635	2686
30°	2492	2582	2664
35°	2422	2535	2639
40°	2340	2484	2613
45°	2255	2425	2586
50°	2172	2359	2563
55°	2069	2317	2545
60°	1977	2260	2537
65°	1845	2247	2565
70°	1699	2227	2642
75°	1534	2259	2779
80°	1327	2326	2611
85°	1099	1951	1951



TEST NUMBER: P308967

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-5700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.6	3.4
10°-20°	272.1	9.6
20°-30°	407.2	14.4
30°-40°	482.2	17.1
40°-50°	491.4	17.4
50°-60°	440.5	15.6
60°-70°	344.8	12.2
70°-80°	222.4	7.9
80°-90°	65.7	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°	775.0	27.5
0°-40°	1257.2	44.5
0°-60°	2189.1	77.6
0°-90°	2822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2822.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1001	1003	1009	1010	1011	95
15°	952	957	965	973	974	268
25°	861	869	887	899	905	396
35°	737	747	772	795	803	461
45°	592	606	637	670	679	458
55°	441	456	494	528	542	395
65°	290	307	353	387	403	288
75°	148	170	217	254	267	158
85°	36	49	63	63	63	42
90°	0	0	0	0	0	



TEST NUMBER: P308967

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-5700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1011.2	1011.2	1011.2	1011.2	1011.2
2.5°	1004.6	1007.3	1012.5	1013.8	1013.8
5°	1000.7	1003.3	1008.6	1009.9	1011.2
7.5°	994.1	995.4	1002.0	1004.6	1005.9
10°	983.6	986.2	992.8	996.7	998.0
12.5°	969.1	973.0	980.9	986.2	987.5
15°	952.0	957.2	965.1	973.0	974.3
17.5°	933.5	938.8	949.3	958.5	961.2
20°	911.1	917.7	929.6	940.1	944.1
22.5°	888.8	894.0	908.5	921.7	925.6
25°	861.1	869.0	887.4	899.3	904.6
27.5°	832.1	841.4	859.8	875.6	880.9
30°	801.9	811.1	830.8	850.6	857.2
32.5°	770.3	780.8	804.5	824.2	830.8
35°	737.3	746.6	771.6	795.3	803.2
37.5°	703.1	711.0	740.0	765.0	772.9
40°	666.2	676.8	707.1	736.0	743.9
42.5°	629.4	641.2	671.5	703.1	711.0
45°	592.5	605.7	637.3	670.2	679.4
47.5°	557.0	567.5	603.0	634.6	647.8
50°	518.8	529.3	563.5	599.1	612.3
52.5°	479.3	493.8	530.6	564.9	580.7
55°	441.1	455.6	493.8	528.0	542.5
57.5°	405.5	417.4	456.9	492.4	506.9
60°	367.4	377.9	420.0	458.2	471.4
62.5°	326.5	342.3	385.8	421.3	437.1
65°	289.7	306.8	352.9	387.1	402.9
67.5°	255.4	271.2	316.0	352.9	370.0
70°	215.9	237.0	283.1	320.0	335.8
72.5°	184.3	202.8	250.2	287.0	304.2
75°	147.5	169.9	217.3	254.1	267.3
77.5°	117.2	139.6	184.3	213.3	219.9
80°	85.6	108.0	150.1	164.6	168.5
82.5°	57.9	79.0	108.0	111.9	113.2
85°	35.6	48.7	63.2	63.2	63.2
87.5°	17.1	19.8	22.4	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)