

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: P308966

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-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: P308966
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-5500K
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: 2816.0 lumens
Efficiency: N/A
Efficacy: 122.4 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

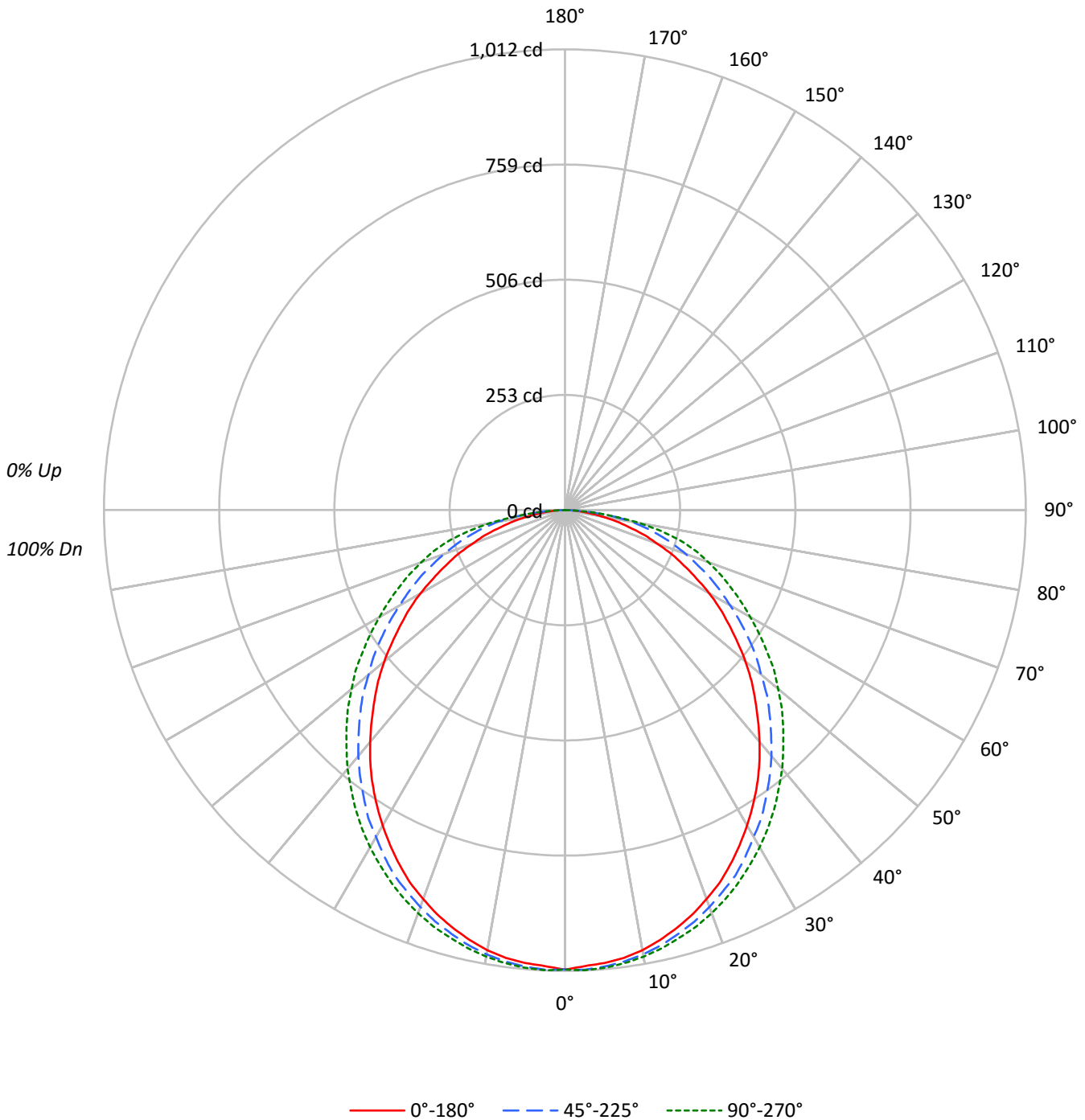
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2715	2715	2715
5°	2697	2719	2726
10°	2682	2707	2721
15°	2646	2683	2709
20°	2604	2656	2698
25°	2551	2629	2680
30°	2486	2576	2658
35°	2417	2529	2633
40°	2335	2479	2608
45°	2250	2420	2580
50°	2167	2354	2558
55°	2065	2312	2540
60°	1973	2256	2532
65°	1841	2242	2560
70°	1696	2223	2636
75°	1530	2254	2773
80°	1323	2321	2607
85°	1096	1948	1948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.4	3.4
10°-20°	271.6	9.6
20°-30°	406.3	14.4
30°-40°	481.2	17.1
40°-50°	490.4	17.4
50°-60°	439.5	15.6
60°-70°	344.1	12.2
70°-80°	221.9	7.9
80°-90°	65.5	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°	773.3	27.5
0°-40°	1254.5	44.5
0°-60°	2184.5	77.6
0°-90°	2816.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2816.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1009	1009	1009	1009	1009	
5°	998	1001	1006	1008	1009	95
15°	950	955	963	971	972	268
25°	859	867	886	897	903	396
35°	736	745	770	794	802	460
45°	591	604	636	669	678	457
55°	440	455	493	527	541	395
65°	289	306	352	386	402	287
75°	147	170	217	254	267	158
85°	36	49	63	63	63	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1009.1	1009.1	1009.1	1009.1	1009.1
2.5°	1002.5	1005.1	1010.4	1011.7	1011.7
5°	998.5	1001.2	1006.4	1007.7	1009.1
7.5°	992.0	993.3	999.9	1002.5	1003.8
10°	981.5	984.1	990.7	994.6	995.9
12.5°	967.0	971.0	978.8	984.1	985.4
15°	949.9	955.2	963.1	971.0	972.3
17.5°	931.5	936.8	947.3	956.5	959.1
20°	909.2	915.8	927.6	938.1	942.1
22.5°	886.9	892.1	906.6	919.7	923.7
25°	859.3	867.2	885.6	897.4	902.6
27.5°	830.4	839.6	858.0	873.7	879.0
30°	800.2	809.4	829.1	848.8	855.3
32.5°	768.6	779.1	802.8	822.5	829.1
35°	735.8	745.0	769.9	793.6	801.5
37.5°	701.6	709.5	738.4	763.4	771.2
40°	664.8	675.3	705.6	734.5	742.3
42.5°	628.0	639.9	670.1	701.6	709.5
45°	591.2	604.4	635.9	668.8	678.0
47.5°	555.8	566.3	601.8	633.3	646.4
50°	517.7	528.2	562.3	597.8	611.0
52.5°	478.3	492.7	529.5	563.7	579.4
55°	440.2	454.6	492.7	526.9	541.3
57.5°	404.7	416.5	455.9	491.4	505.8
60°	366.6	377.1	419.1	457.2	470.4
62.5°	325.8	341.6	385.0	420.4	436.2
65°	289.1	306.1	352.1	386.3	402.0
67.5°	254.9	270.7	315.3	352.1	369.2
70°	215.5	236.5	282.5	319.3	335.0
72.5°	183.9	202.3	249.6	286.4	303.5
75°	147.2	169.5	216.8	253.6	266.7
77.5°	116.9	139.3	183.9	212.8	219.4
80°	85.4	107.7	149.8	164.2	168.2
82.5°	57.8	78.8	107.7	111.7	113.0
85°	35.5	48.6	63.1	63.1	63.1
87.5°	17.1	19.7	22.3	21.0	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)