

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: P308976

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA125-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: P308976
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-CA125-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2812.0 lumens
Efficiency: N/A
Efficacy: 122.3 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

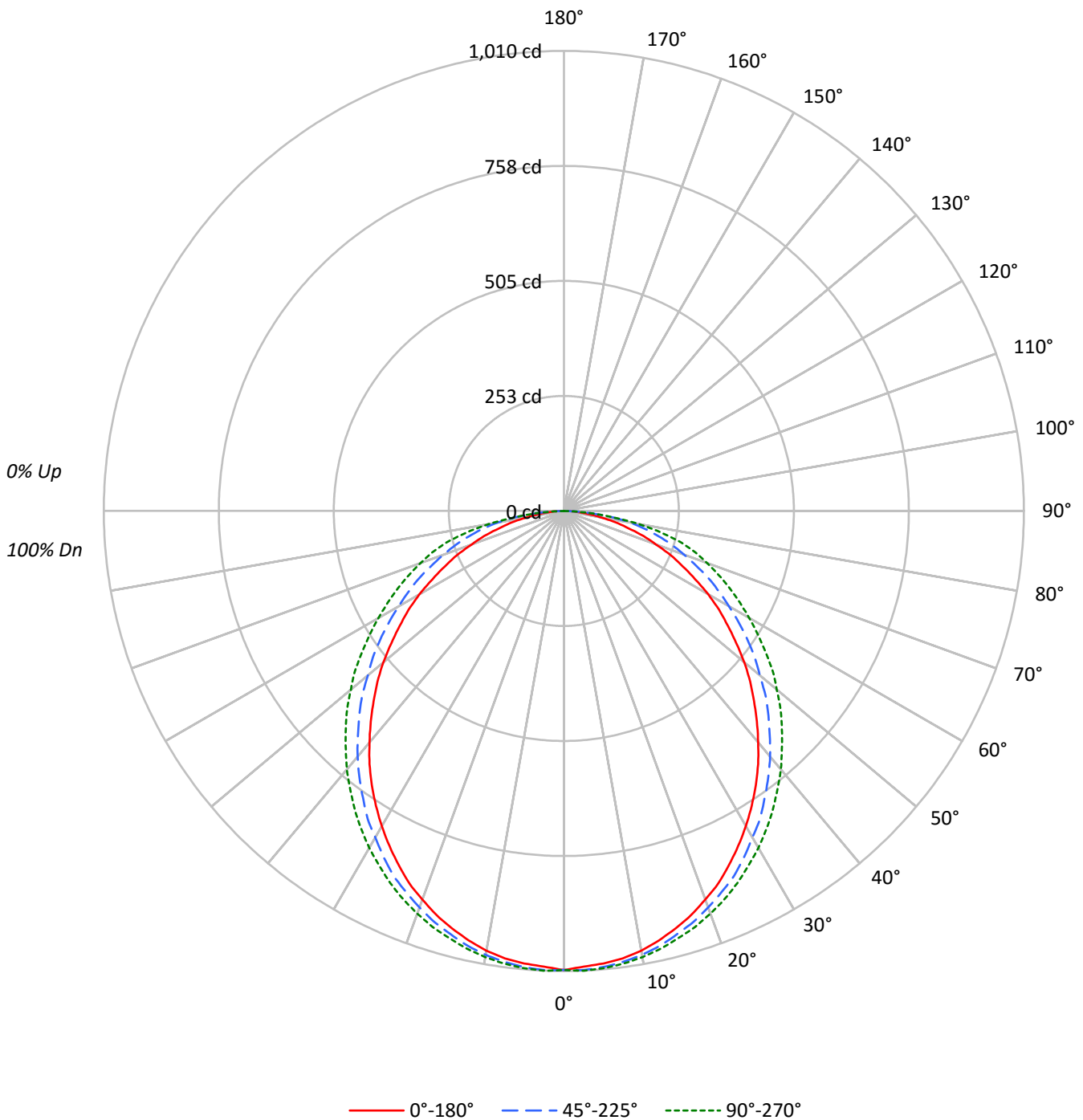
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2711	2711	2711
5°	2693	2715	2722
10°	2678	2703	2717
15°	2643	2679	2705
20°	2600	2653	2694
25°	2548	2626	2676
30°	2483	2573	2654
35°	2414	2526	2629
40°	2332	2475	2604
45°	2247	2417	2576
50°	2164	2351	2554
55°	2062	2308	2536
60°	1970	2252	2528
65°	1838	2239	2557
70°	1693	2220	2633
75°	1527	2251	2769
80°	1322	2318	2602
85°	1093	1945	1945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.3	3.4
10°-20°	271.2	9.6
20°-30°	405.8	14.4
30°-40°	480.5	17.1
40°-50°	489.7	17.4
50°-60°	438.9	15.6
60°-70°	343.6	12.2
70°-80°	221.6	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°	772.2	27.5
0°-40°	1252.7	44.5
0°-60°	2181.3	77.6
0°-90°	2812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2812.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1008	1008	1008	1008	1008	
5°	997	1000	1005	1006	1008	95
15°	949	954	962	970	971	267
25°	858	866	884	896	901	395
35°	735	744	769	792	800	459
45°	590	604	635	668	677	456
55°	440	454	492	526	541	394
65°	289	306	352	386	402	287
75°	147	169	216	253	266	158
85°	35	48	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°	1007.6	1007.6	1007.6	1007.6	1007.6
2.5°	1001.1	1003.7	1008.9	1010.3	1010.3
5°	997.1	999.8	1005.0	1006.3	1007.6
7.5°	990.6	991.9	998.4	1001.1	1002.4
10°	980.1	982.7	989.3	993.2	994.5
12.5°	965.6	969.6	977.5	982.7	984.0
15°	948.6	953.8	961.7	969.6	970.9
17.5°	930.2	935.5	946.0	955.1	957.8
20°	907.9	914.5	926.3	936.8	940.7
22.5°	885.6	890.9	905.3	918.4	922.3
25°	858.1	865.9	884.3	896.1	901.4
27.5°	829.2	838.4	856.7	872.5	877.7
30°	799.0	808.2	827.9	847.6	854.1
32.5°	767.5	778.0	801.6	821.3	827.9
35°	734.7	743.9	768.8	792.5	800.3
37.5°	700.6	708.5	737.4	762.3	770.2
40°	663.9	674.4	704.6	733.4	741.3
42.5°	627.1	639.0	669.1	700.6	708.5
45°	590.4	603.5	635.0	667.8	677.0
47.5°	555.0	565.5	600.9	632.4	645.5
50°	516.9	527.4	561.5	597.0	610.1
52.5°	477.6	492.0	528.7	562.9	578.6
55°	439.5	454.0	492.0	526.1	540.6
57.5°	404.1	415.9	455.3	490.7	505.1
60°	366.1	376.5	418.5	456.6	469.7
62.5°	325.4	341.1	384.4	419.8	435.6
65°	288.6	305.7	351.6	385.7	401.5
67.5°	254.5	270.3	314.9	351.6	368.7
70°	215.2	236.2	282.1	318.8	334.6
72.5°	183.7	202.1	249.3	286.0	303.1
75°	146.9	169.2	216.5	253.2	266.3
77.5°	116.8	139.1	183.7	212.5	219.1
80°	85.3	107.6	149.6	164.0	167.9
82.5°	57.7	78.7	107.6	111.5	112.8
85°	35.4	48.5	63.0	63.0	63.0
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)