

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: P312946

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-CA125-W2A-U-3500K**

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: P312946
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-L83050-S-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2698.0 lumens
Efficiency: N/A
Efficacy: 120.4 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

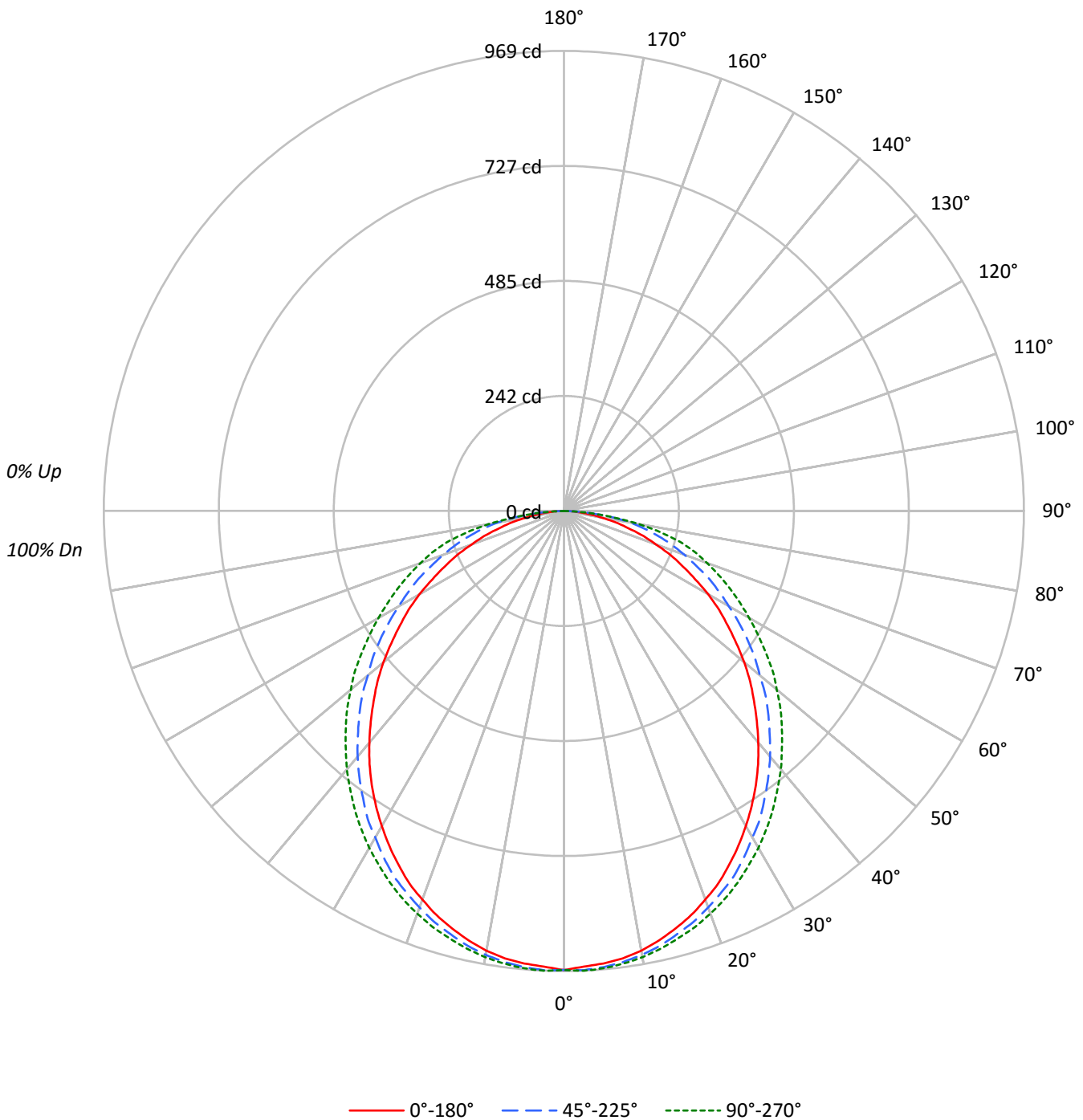
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2602	2602	2602
5°	2584	2605	2612
10°	2569	2594	2607
15°	2535	2571	2595
20°	2495	2545	2585
25°	2445	2519	2568
30°	2382	2468	2546
35°	2316	2423	2523
40°	2238	2375	2498
45°	2156	2319	2472
50°	2076	2256	2451
55°	1978	2215	2433
60°	1890	2161	2426
65°	1763	2148	2453
70°	1624	2129	2526
75°	1466	2159	2656
80°	1268	2224	2497
85°	1050	1865	1865



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	3.4
10°-20°	260.2	9.6
20°-30°	389.3	14.4
30°-40°	461.0	17.1
40°-50°	469.9	17.4
50°-60°	421.1	15.6
60°-70°	329.7	12.2
70°-80°	212.6	7.9
80°-90°	62.8	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°	740.9	27.5
0°-40°	1201.9	44.5
0°-60°	2092.9	77.6
0°-90°	2698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2698.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	967	967	967	967	967	
5°	957	959	964	966	967	91
15°	910	915	923	930	932	257
25°	823	831	848	860	865	379
35°	705	714	738	760	768	441
45°	566	579	609	641	650	437
55°	422	436	472	505	519	378
65°	277	293	337	370	385	275
75°	141	162	208	243	256	151
85°	34	47	60	60	60	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	966.8	966.8	966.8	966.8	966.8
2.5°	960.5	963.0	968.0	969.3	969.3
5°	956.7	959.2	964.3	965.5	966.8
7.5°	950.4	951.7	958.0	960.5	961.7
10°	940.3	942.9	949.2	952.9	954.2
12.5°	926.5	930.3	937.8	942.9	944.1
15°	910.1	915.2	922.7	930.3	931.5
17.5°	892.5	897.5	907.6	916.4	918.9
20°	871.1	877.4	888.7	898.8	902.6
22.5°	849.7	854.7	868.6	881.2	885.0
25°	823.3	830.8	848.4	859.8	864.8
27.5°	795.6	804.4	822.0	837.1	842.2
30°	766.6	775.4	794.3	813.2	819.5
32.5°	736.4	746.5	769.1	788.0	794.3
35°	704.9	713.8	737.7	760.3	767.9
37.5°	672.2	679.8	707.5	731.4	738.9
40°	637.0	647.0	676.0	703.7	711.2
42.5°	601.7	613.0	642.0	672.2	679.8
45°	566.5	579.1	609.3	640.7	649.6
47.5°	532.5	542.6	576.5	606.8	619.3
50°	496.0	506.0	538.8	572.8	585.4
52.5°	458.2	472.1	507.3	540.0	555.1
55°	421.7	435.6	472.1	504.8	518.6
57.5°	387.7	399.0	436.8	470.8	484.6
60°	351.2	361.3	401.6	438.1	450.7
62.5°	312.2	327.3	368.8	402.8	417.9
65°	276.9	293.3	337.4	370.1	385.2
67.5°	244.2	259.3	302.1	337.4	353.7
70°	206.4	226.6	270.6	305.9	321.0
72.5°	176.2	193.9	239.2	274.4	290.8
75°	141.0	162.4	207.7	243.0	255.5
77.5°	112.0	133.4	176.2	203.9	210.2
80°	81.8	103.2	143.5	157.4	161.1
82.5°	55.4	75.5	103.2	107.0	108.3
85°	34.0	46.6	60.4	60.4	60.4
87.5°	16.4	18.9	21.4	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)