

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: P312947

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-CA125-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: P312947
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-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2833.0 lumens
Efficiency: N/A
Efficacy: 123.7 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

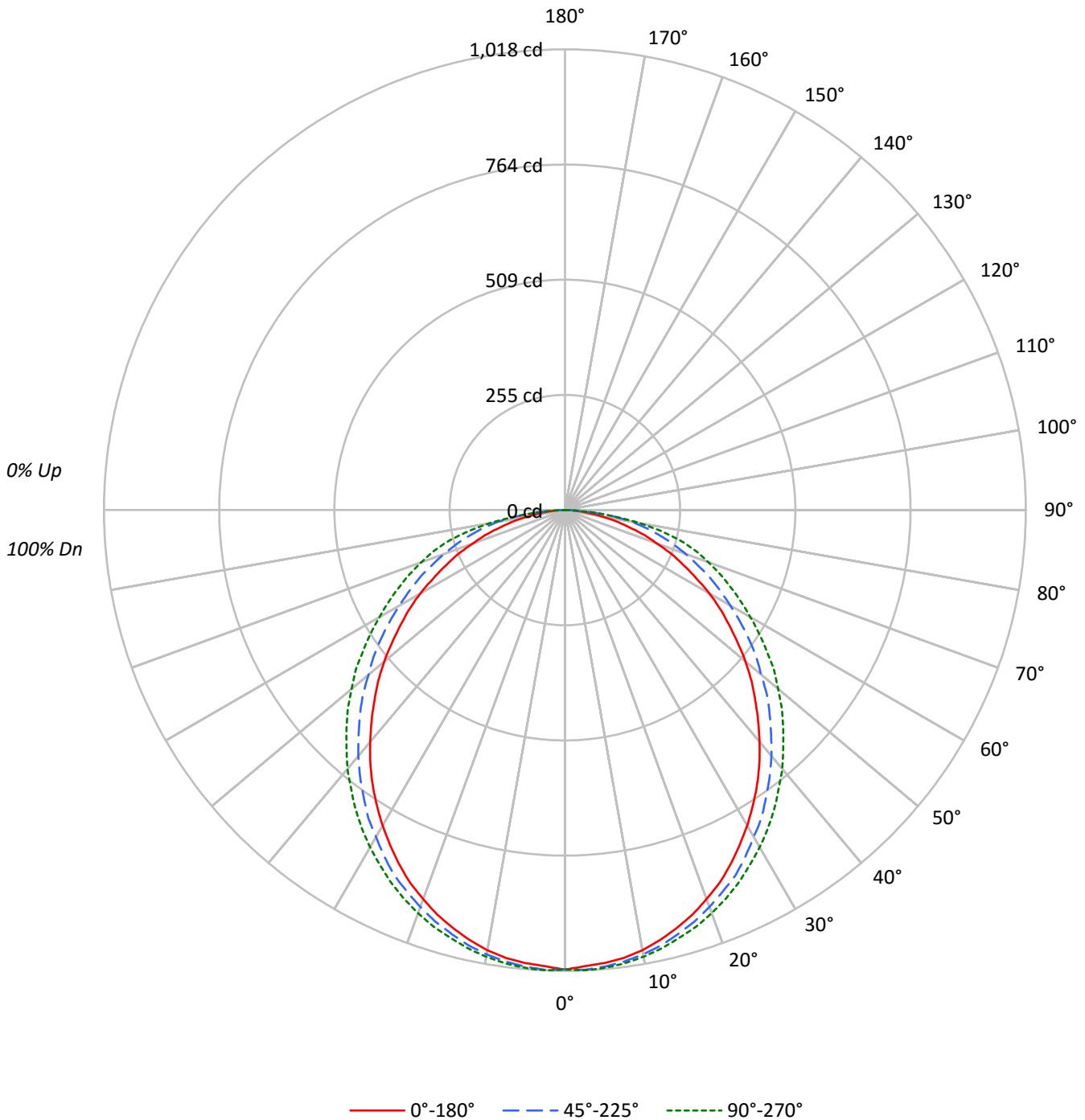
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2732	2732	2732
5°	2714	2735	2742
10°	2698	2723	2738
15°	2662	2699	2725
20°	2619	2672	2714
25°	2567	2645	2696
30°	2501	2592	2674
35°	2432	2545	2649
40°	2349	2493	2623
45°	2264	2435	2596
50°	2180	2368	2573
55°	2077	2326	2555
60°	1985	2270	2547
65°	1852	2255	2576
70°	1706	2236	2652
75°	1539	2268	2790
80°	1331	2335	2622
85°	1102	1958	1958



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	3.4
10°-20°	273.2	9.6
20°-30°	408.8	14.4
30°-40°	484.1	17.1
40°-50°	493.3	17.4
50°-60°	442.2	15.6
60°-70°	346.2	12.2
70°-80°	223.2	7.9
80°-90°	65.9	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°	778.0	27.5
0°-40°	1262.1	44.5
0°-60°	2197.6	77.6
0°-90°	2833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1015	1015	1015	1015	1015	
5°	1005	1007	1012	1014	1015	95
15°	956	961	969	977	978	269
25°	864	872	891	903	908	398
35°	740	750	775	798	806	463
45°	595	608	640	673	682	459
55°	443	457	496	530	545	397
65°	291	308	354	389	404	289
75°	148	170	218	255	268	159
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°	1015.2	1015.2	1015.2	1015.2	1015.2
2.5°	1008.5	1011.2	1016.5	1017.8	1017.8
5°	1004.6	1007.2	1012.5	1013.8	1015.2
7.5°	998.0	999.3	1005.9	1008.5	1009.9
10°	987.4	990.0	996.6	1000.6	1001.9
12.5°	972.9	976.8	984.8	990.0	991.4
15°	955.7	961.0	968.9	976.8	978.1
17.5°	937.2	942.5	953.0	962.3	964.9
20°	914.7	921.3	933.2	943.8	947.7
22.5°	892.2	897.5	912.1	925.3	929.2
25°	864.5	872.4	890.9	902.8	908.1
27.5°	835.4	844.6	863.1	879.0	884.3
30°	805.0	814.2	834.1	853.9	860.5
32.5°	773.3	783.8	807.6	827.5	834.1
35°	740.2	749.5	774.6	798.4	806.3
37.5°	705.8	713.8	742.9	768.0	775.9
40°	668.8	679.4	709.8	738.9	746.8
42.5°	631.8	643.7	674.1	705.8	713.8
45°	594.8	608.0	639.8	672.8	682.1
47.5°	559.1	569.7	605.4	637.1	650.3
50°	520.8	531.4	565.7	601.4	614.6
52.5°	481.1	495.7	532.7	567.1	582.9
55°	442.8	457.3	495.7	530.0	544.6
57.5°	407.1	419.0	458.7	494.4	508.9
60°	368.8	379.4	421.7	460.0	473.2
62.5°	327.8	343.7	387.3	423.0	438.8
65°	290.8	308.0	354.2	388.6	404.5
67.5°	256.4	272.3	317.2	354.2	371.4
70°	216.8	237.9	284.2	321.2	337.1
72.5°	185.1	203.6	251.1	288.2	305.3
75°	148.0	170.5	218.1	255.1	268.3
77.5°	117.6	140.1	185.1	214.1	220.7
80°	85.9	108.4	150.7	165.2	169.2
82.5°	58.2	79.3	108.4	112.4	113.7
85°	35.7	48.9	63.4	63.4	63.4
87.5°	17.2	19.8	22.5	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)