

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: P308968

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-6500K**

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: P308968
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-6500K
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: 2830.0 lumens
Efficiency: N/A
Efficacy: 120.9 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

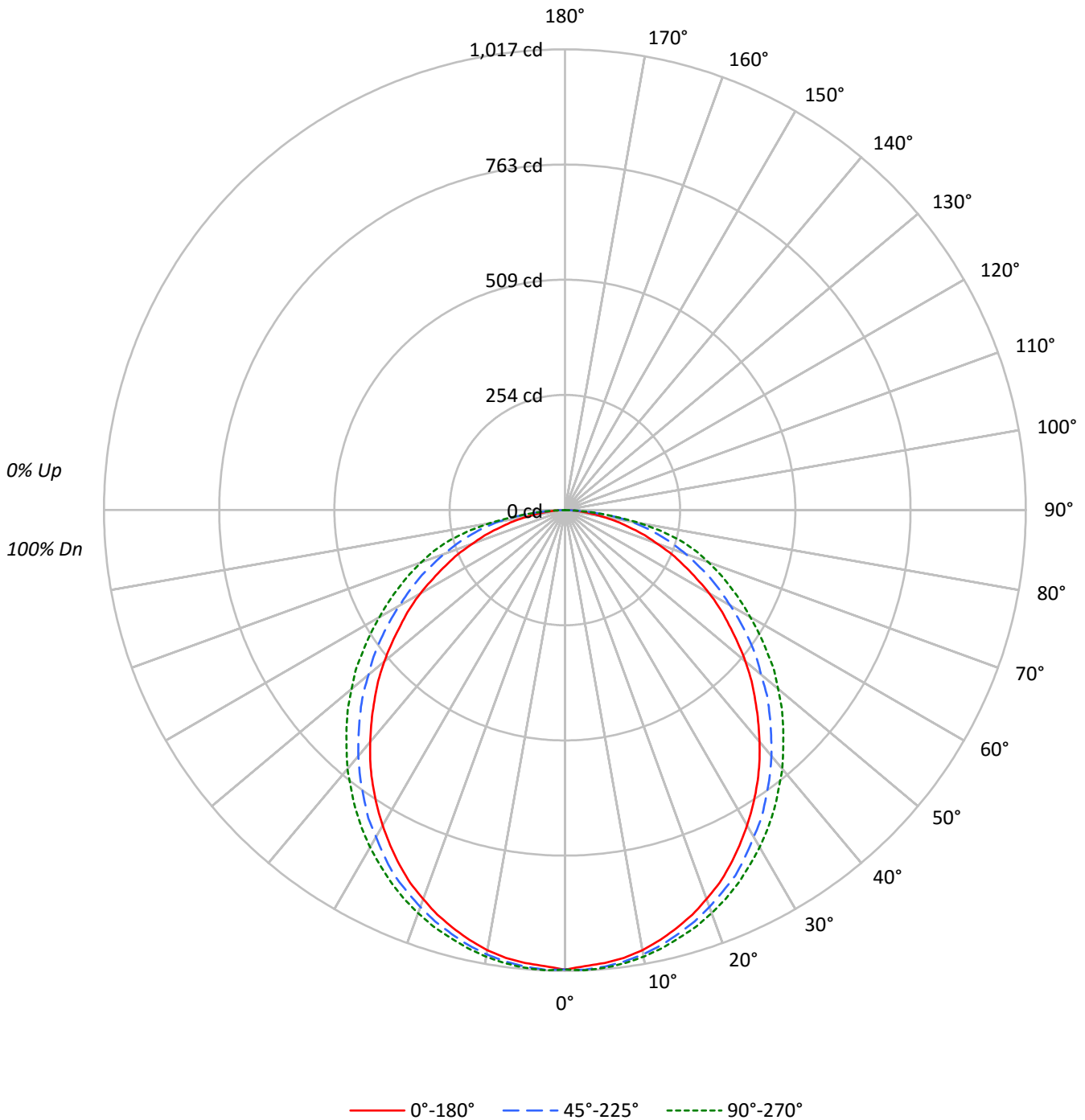
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2729	2729	2729
5°	2711	2732	2739
10°	2695	2720	2735
15°	2660	2696	2722
20°	2617	2670	2711
25°	2564	2643	2693
30°	2499	2589	2671
35°	2429	2542	2646
40°	2347	2491	2621
45°	2261	2432	2593
50°	2178	2366	2570
55°	2075	2323	2552
60°	1983	2267	2544
65°	1850	2253	2572
70°	1703	2234	2649
75°	1538	2266	2786
80°	1330	2332	2619
85°	1102	1958	1958



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	3.4
10°-20°	272.9	9.6
20°-30°	408.4	14.4
30°-40°	483.6	17.1
40°-50°	492.8	17.4
50°-60°	441.7	15.6
60°-70°	345.8	12.2
70°-80°	223.0	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°	777.2	27.5
0°-40°	1260.8	44.5
0°-60°	2195.3	77.6
0°-90°	2830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1014	1014	1014	1014	1014	
5°	1004	1006	1011	1013	1014	95
15°	955	960	968	976	977	269
25°	864	872	890	902	907	398
35°	739	749	774	798	806	462
45°	594	607	639	672	681	459
55°	442	457	495	530	544	397
65°	290	308	354	388	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°	1014.1	1014.1	1014.1	1014.1	1014.1
2.5°	1007.5	1010.1	1015.4	1016.7	1016.7
5°	1003.5	1006.2	1011.4	1012.8	1014.1
7.5°	996.9	998.2	1004.8	1007.5	1008.8
10°	986.3	989.0	995.6	999.6	1000.9
12.5°	971.8	975.8	983.7	989.0	990.3
15°	954.7	959.9	967.9	975.8	977.1
17.5°	936.2	941.5	952.0	961.3	963.9
20°	913.7	920.3	932.2	942.8	946.7
22.5°	891.3	896.6	911.1	924.3	928.3
25°	863.6	871.5	890.0	901.8	907.1
27.5°	834.5	843.7	862.2	878.1	883.4
30°	804.1	813.4	833.2	853.0	859.6
32.5°	772.4	783.0	806.8	826.6	833.2
35°	739.4	748.7	773.8	797.5	805.5
37.5°	705.1	713.0	742.1	767.2	775.1
40°	668.1	678.7	709.1	738.1	746.0
42.5°	631.2	643.0	673.4	705.1	713.0
45°	594.2	607.4	639.1	672.1	681.3
47.5°	558.5	569.1	604.7	636.4	649.6
50°	520.2	530.8	565.1	600.8	614.0
52.5°	480.6	495.2	532.1	566.5	582.3
55°	442.3	456.9	495.2	529.5	544.0
57.5°	406.7	418.6	458.2	493.8	508.4
60°	368.4	379.0	421.2	459.5	472.7
62.5°	327.5	343.3	386.9	422.5	438.4
65°	290.5	307.7	353.9	388.2	404.0
67.5°	256.2	272.0	316.9	353.9	371.0
70°	216.5	237.7	283.9	320.9	336.7
72.5°	184.9	203.3	250.9	287.9	305.0
75°	147.9	170.3	217.9	254.8	268.0
77.5°	117.5	140.0	184.9	213.9	220.5
80°	85.8	108.3	150.5	165.1	169.0
82.5°	58.1	79.2	108.3	112.2	113.6
85°	35.7	48.9	63.4	63.4	63.4
87.5°	17.2	19.8	22.4	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)