

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: P308964

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-4500K**

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: P308964
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-4500K
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: 2750.0 lumens
Efficiency: N/A
Efficacy: 120.6 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

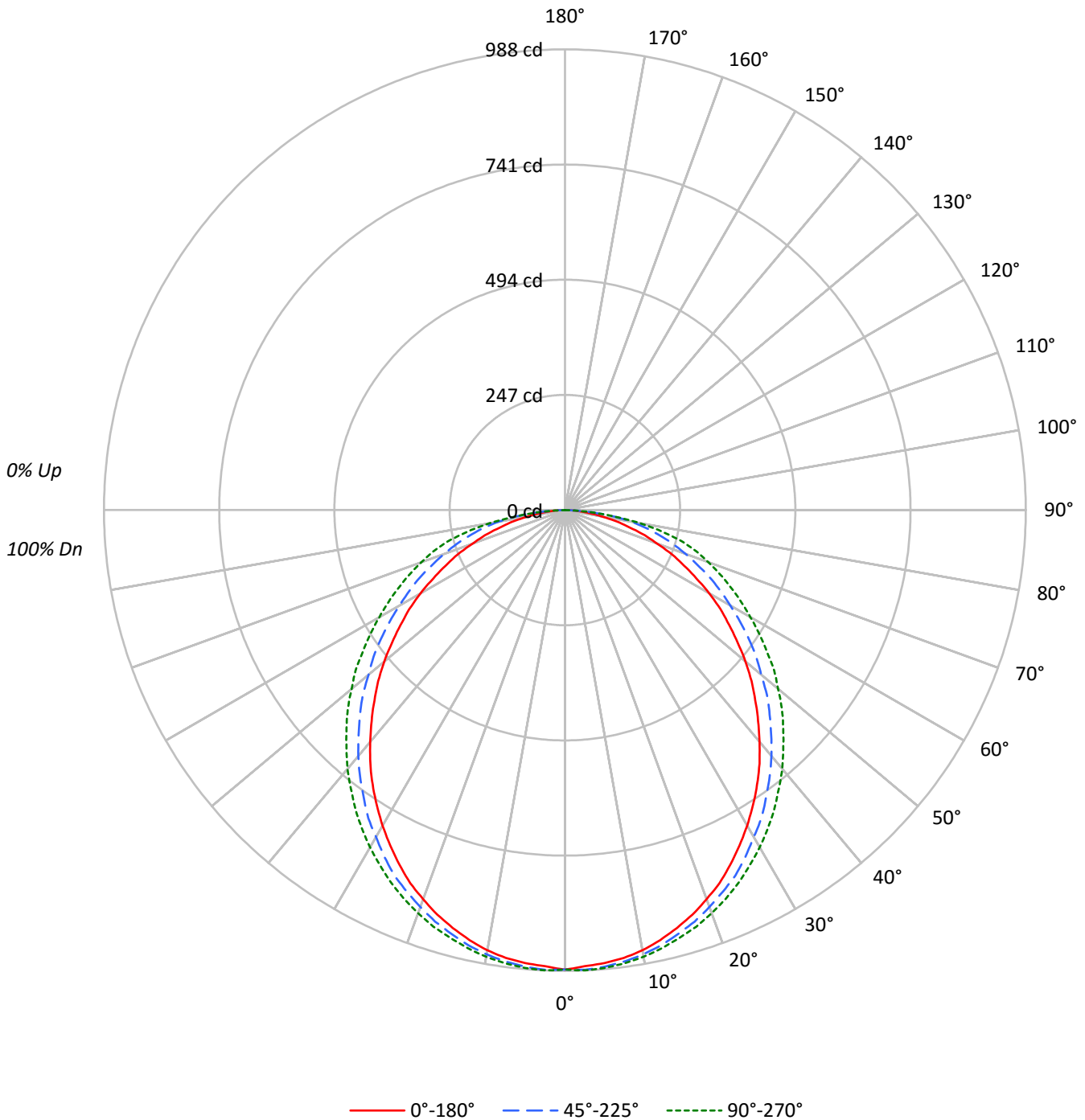
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2652	2652	2652
5°	2634	2655	2662
10°	2619	2643	2658
15°	2584	2620	2645
20°	2543	2594	2635
25°	2491	2568	2617
30°	2428	2516	2596
35°	2360	2470	2571
40°	2281	2420	2546
45°	2197	2363	2520
50°	2116	2299	2498
55°	2016	2258	2480
60°	1927	2203	2472
65°	1798	2190	2500
70°	1655	2171	2574
75°	1494	2201	2708
80°	1292	2267	2545
85°	1068	1902	1902



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.2	3.4
10°-20°	265.2	9.6
20°-30°	396.8	14.4
30°-40°	469.9	17.1
40°-50°	478.9	17.4
50°-60°	429.2	15.6
60°-70°	336.0	12.2
70°-80°	216.7	7.9
80°-90°	64.0	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°	755.2	27.5
0°-40°	1225.1	44.5
0°-60°	2133.2	77.6
0°-90°	2750.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2750.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	985	985	985	985	985	
5°	975	978	983	984	985	93
15°	928	933	940	948	950	262
25°	839	847	865	876	882	386
35°	718	728	752	775	783	449
45°	577	590	621	653	662	446
55°	430	444	481	514	529	385
65°	282	299	344	377	393	280
75°	144	166	212	248	260	154
85°	35	48	62	62	62	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	985.4	985.4	985.4	985.4	985.4
2.5°	979.0	981.6	986.7	988.0	988.0
5°	975.1	977.7	982.8	984.1	985.4
7.5°	968.7	970.0	976.4	979.0	980.3
10°	958.5	961.0	967.4	971.3	972.6
12.5°	944.4	948.2	955.9	961.0	962.3
15°	927.7	932.8	940.5	948.2	949.5
17.5°	909.7	914.8	925.1	934.1	936.7
20°	887.9	894.3	905.9	916.1	920.0
22.5°	866.1	871.2	885.3	898.2	902.0
25°	839.1	846.8	864.8	876.3	881.5
27.5°	810.9	819.9	837.9	853.3	858.4
30°	781.4	790.4	809.6	828.9	835.3
32.5°	750.6	760.9	784.0	803.2	809.6
35°	718.5	727.5	751.9	775.0	782.7
37.5°	685.2	692.9	721.1	745.5	753.2
40°	649.2	659.5	689.0	717.2	724.9
42.5°	613.3	624.9	654.4	685.2	692.9
45°	577.4	590.2	621.0	653.1	662.1
47.5°	542.7	553.0	587.7	618.4	631.3
50°	505.5	515.8	549.2	583.8	596.6
52.5°	467.0	481.2	517.1	550.4	565.8
55°	429.8	443.9	481.2	514.5	528.6
57.5°	395.2	406.7	445.2	479.9	494.0
60°	358.0	368.2	409.3	446.5	459.3
62.5°	318.2	333.6	375.9	410.6	426.0
65°	282.3	299.0	343.9	377.2	392.6
67.5°	248.9	264.3	307.9	343.9	360.5
70°	210.4	231.0	275.9	311.8	327.2
72.5°	179.6	197.6	243.8	279.7	296.4
75°	143.7	165.5	211.7	247.6	260.5
77.5°	114.2	136.0	179.6	207.9	214.3
80°	83.4	105.2	146.3	160.4	164.2
82.5°	56.5	77.0	105.2	109.1	110.3
85°	34.6	47.5	61.6	61.6	61.6
87.5°	16.7	19.2	21.8	20.5	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)