

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: P312352

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-CP125-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: P312352
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-S-CP125-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 2904.0 lumens
Efficiency: N/A
Efficacy: 119.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

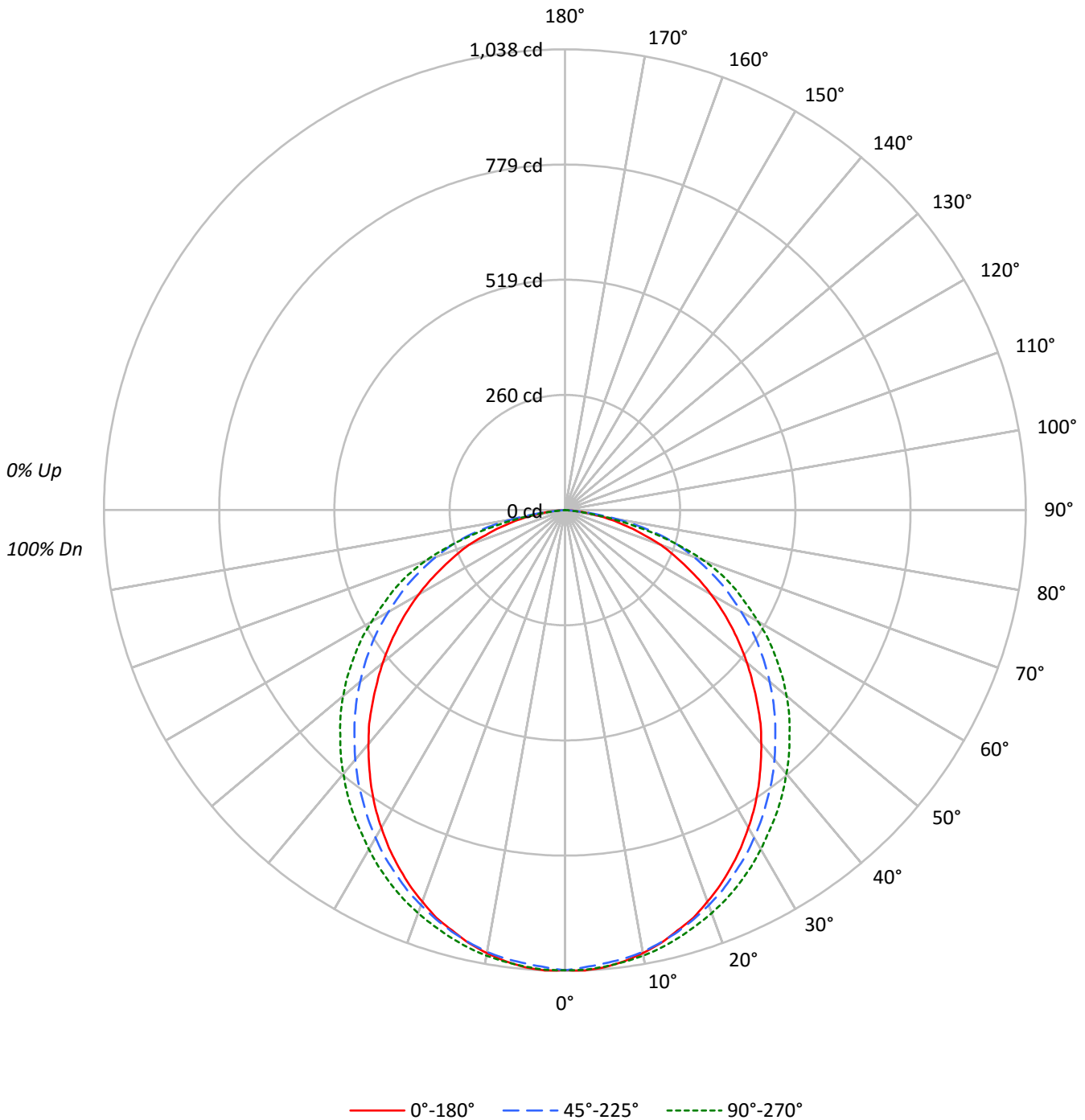
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	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	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2790	2790	2790
5°	2793	2769	2789
10°	2770	2762	2786
15°	2732	2740	2776
20°	2688	2713	2767
25°	2633	2681	2757
30°	2568	2649	2742
35°	2497	2611	2734
40°	2418	2579	2726
45°	2329	2548	2723
50°	2242	2520	2730
55°	2148	2499	2723
60°	2046	2464	2704
65°	1926	2457	2705
70°	1813	2436	2628
75°	1572	2380	2246
80°	1272	1918	1495
85°	846	667	445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.4
10°-20°	278.6	9.6
20°-30°	417.9	14.4
30°-40°	498.4	17.2
40°-50°	515.3	17.7
50°-60°	470.5	16.2
60°-70°	370.2	12.7
70°-80°	215.5	7.4
80°-90°	39.7	1.4
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°	794.3	27.4
0°-40°	1292.8	44.5
0°-60°	2278.5	78.5
0°-90°	2904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2904.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1034	1031	1025	1034	1032	98
15°	980	982	983	996	996	277
25°	887	891	903	924	929	408
35°	760	770	795	825	832	475
45°	612	632	670	707	716	473
55°	458	482	533	572	580	409
65°	302	334	386	416	425	300
75°	151	187	229	225	216	161
85°	27	39	22	17	14	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1036.7	1036.7	1036.7	1036.7	1036.7
2.5°	1038.1	1035.2	1030.9	1038.1	1036.7
5°	1033.8	1030.9	1025.2	1033.8	1032.4
7.5°	1025.2	1022.3	1019.4	1028.0	1026.6
10°	1013.6	1012.2	1010.8	1020.8	1019.4
12.5°	999.2	999.2	997.8	1009.3	1009.3
15°	980.5	982.0	983.4	996.4	996.4
17.5°	963.2	961.8	966.1	980.5	982.0
20°	938.8	941.7	947.4	964.7	966.1
22.5°	914.3	917.2	927.3	944.5	948.9
25°	886.9	891.3	902.8	924.4	928.7
27.5°	858.1	863.9	879.7	902.8	907.1
30°	826.5	835.1	852.4	878.3	882.6
32.5°	794.8	803.4	825.0	850.9	856.7
35°	760.2	770.3	794.8	825.0	832.2
37.5°	724.2	737.2	766.0	796.2	804.9
40°	688.2	702.6	734.3	766.0	776.1
42.5°	652.2	666.6	701.2	737.2	747.3
45°	611.9	632.1	669.5	707.0	715.6
47.5°	573.1	594.7	636.4	673.8	685.4
50°	535.6	557.2	601.9	640.7	652.2
52.5°	496.7	519.8	567.3	607.6	617.7
55°	457.9	482.3	532.7	571.6	580.3
57.5°	419.0	444.9	496.7	534.2	544.3
60°	380.1	407.5	457.9	495.3	502.5
62.5°	341.2	370.0	421.9	455.0	462.2
65°	302.4	334.0	385.9	416.1	424.8
67.5°	264.9	296.6	347.0	375.8	383.0
70°	230.4	259.2	309.6	331.2	334.0
72.5°	187.2	223.2	272.1	283.6	276.4
75°	151.2	187.2	228.9	224.6	216.0
77.5°	115.2	151.2	178.5	164.1	152.6
80°	82.1	118.1	123.8	102.2	96.5
82.5°	53.3	82.1	69.1	53.3	43.2
85°	27.4	38.9	21.6	17.3	14.4
87.5°	8.6	5.8	2.9	2.9	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)