

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: P309992

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-5500K**

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: P309992
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 5500K 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: 2111.0 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

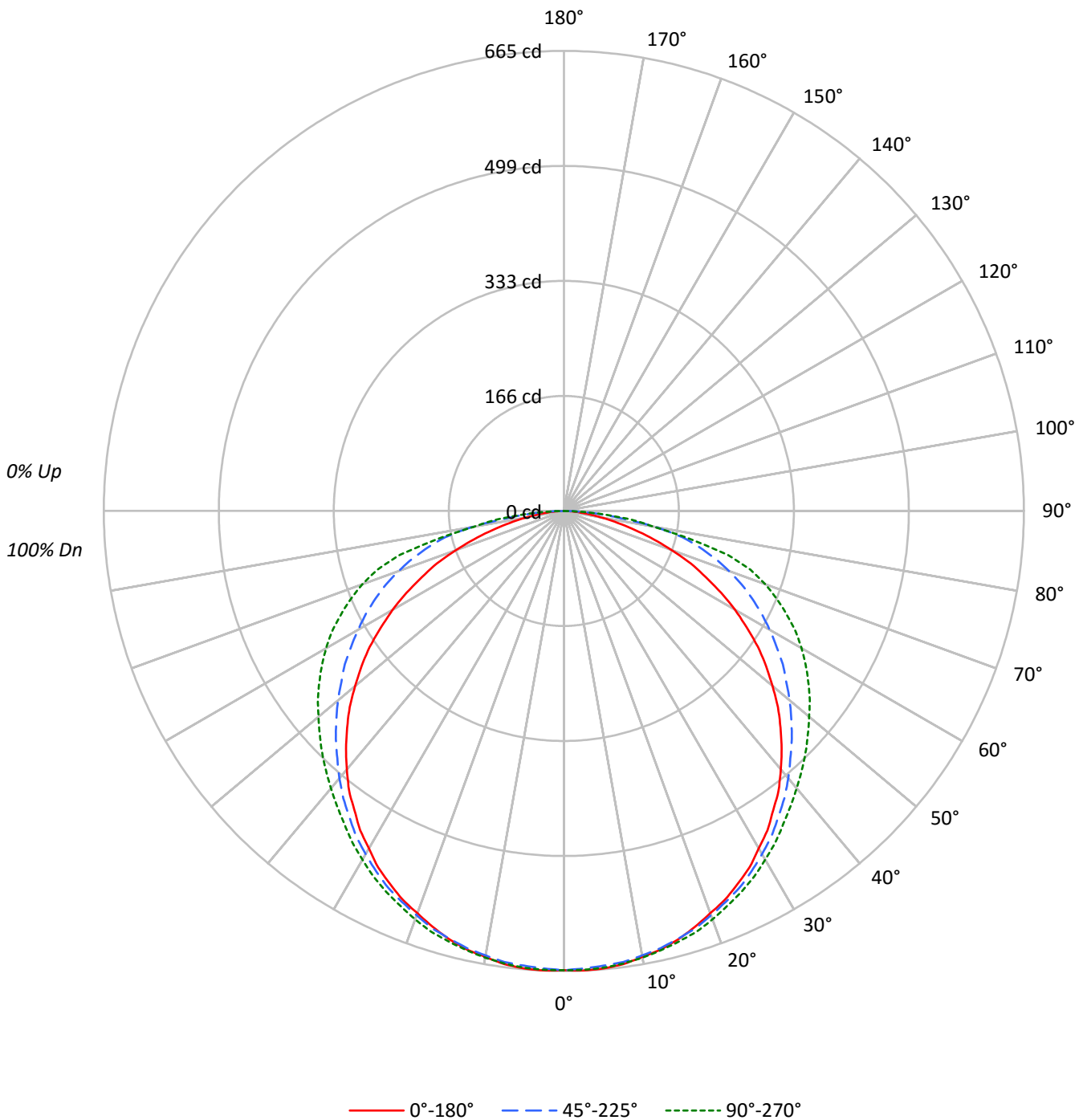
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	893	893	893
5°	897	891	895
10°	894	891	896
15°	893	891	897
20°	886	891	899
25°	883	892	902
30°	875	890	905
35°	867	887	908
40°	857	886	919
45°	843	887	940
50°	824	892	969
55°	803	906	1012
60°	769	924	1068
65°	720	957	1133
70°	655	1001	1219
75°	555	1056	1274
80°	438	1063	1031
85°	323	809	905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	3.0
10°-20°	181.2	8.6
20°-30°	277.1	13.1
30°-40°	338.8	16.0
40°-50°	361.1	17.1
50°-60°	345.3	16.4
60°-70°	292.5	13.9
70°-80°	196.6	9.3
80°-90°	55.4	2.6
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°	521.3	24.7
0°-40°	860.2	40.7
0°-60°	1566.5	74.2
0°-90°	2111.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2111.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	664	663	660	663	663	63
15°	641	641	640	645	644	181
25°	595	597	601	606	607	274
35°	528	532	540	551	553	331
45°	443	450	466	486	494	342
55°	342	355	386	417	431	305
65°	226	249	300	340	356	225
75°	107	146	203	238	245	114
85°	21	43	52	56	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	663.8	663.8	663.8	663.8	663.8
2.5°	664.9	664.9	661.8	663.8	663.8
5°	663.8	662.8	659.7	662.8	662.8
7.5°	660.7	659.7	657.6	660.7	659.7
10°	654.4	654.4	652.3	655.5	655.5
12.5°	649.2	648.1	647.1	651.3	650.2
15°	640.8	640.8	639.8	645.0	644.0
17.5°	630.3	631.4	632.4	636.6	637.7
20°	618.8	620.9	622.0	628.2	628.2
22.5°	608.4	609.4	611.5	617.8	617.8
25°	594.7	596.8	601.0	606.3	607.3
27.5°	581.1	582.2	587.4	594.7	595.8
30°	563.3	566.5	572.8	581.1	582.2
32.5°	547.6	550.8	558.1	566.5	568.6
35°	527.7	531.9	540.3	550.8	552.9
37.5°	509.9	513.1	523.5	535.1	538.2
40°	487.9	494.2	504.7	518.3	523.5
42.5°	466.0	472.2	484.8	502.6	508.9
45°	442.9	450.2	466.0	485.8	494.2
47.5°	419.9	428.3	446.1	469.1	478.5
50°	393.7	404.2	426.2	452.3	462.8
52.5°	368.6	381.1	405.2	434.5	448.2
55°	342.4	355.0	386.4	416.7	431.4
57.5°	313.1	329.8	364.4	398.9	414.6
60°	285.9	301.6	343.4	381.1	396.8
62.5°	256.5	277.5	322.5	362.3	378.0
65°	226.2	249.2	300.5	340.3	356.0
67.5°	198.9	224.1	278.5	318.3	334.0
70°	166.5	197.9	254.4	294.2	309.9
72.5°	136.1	170.7	229.3	268.1	282.7
75°	106.8	145.5	203.1	237.7	245.0
77.5°	79.6	120.4	175.9	190.6	185.3
80°	56.5	96.3	137.2	129.8	133.0
82.5°	36.6	73.3	84.8	96.3	99.5
85°	20.9	42.9	52.4	56.5	58.6
87.5°	9.4	15.7	20.9	20.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)