

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: P313486

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP250-W2A-U-3500K**

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: P313486
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: 24FCZ2-35HE-UNV-L83050-RDP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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: 2008.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

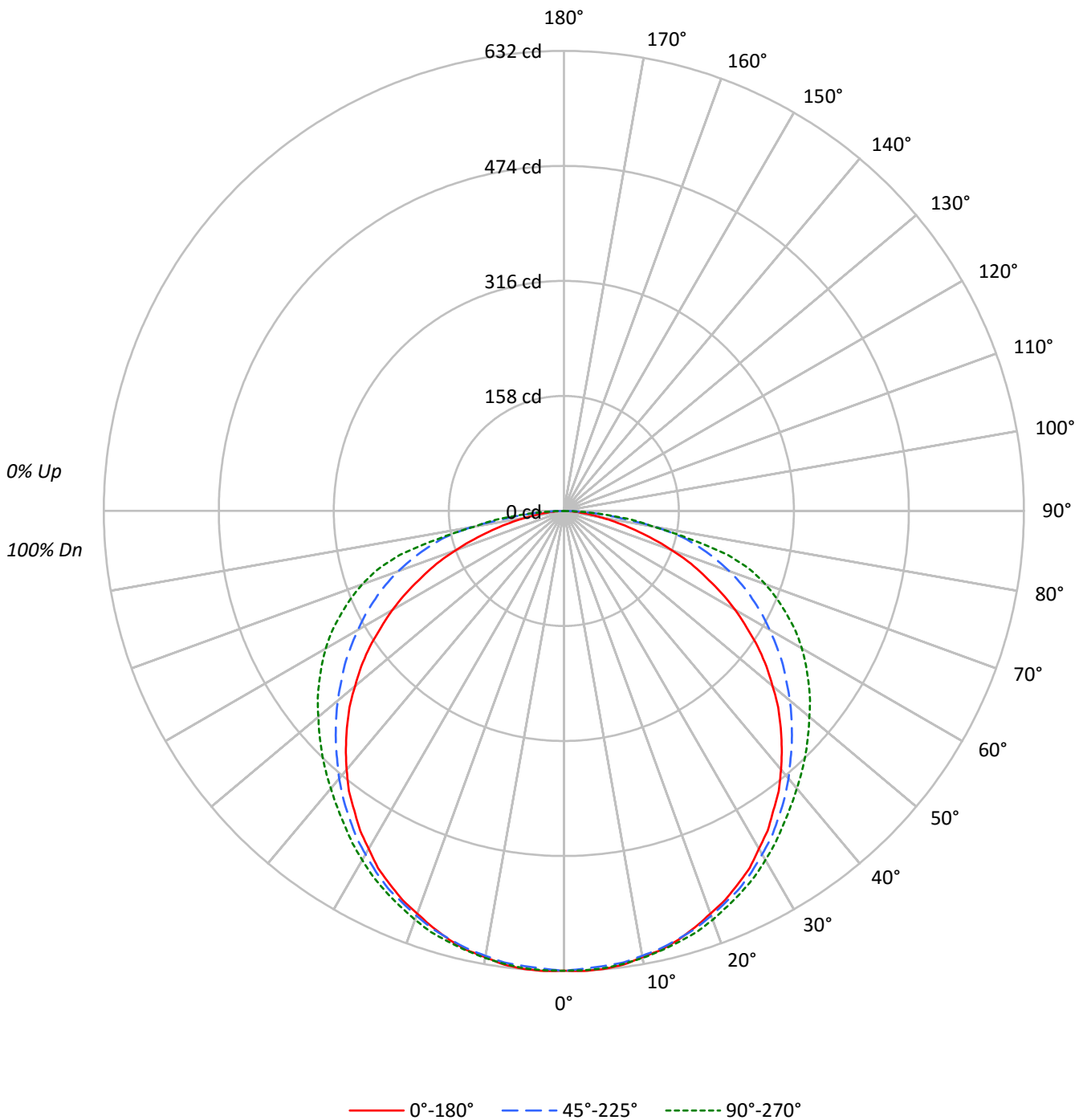
Input Watts (W): 26
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	850	850	850
5°	853	848	852
10°	850	848	852
15°	849	848	853
20°	843	847	856
25°	840	849	858
30°	832	846	860
35°	825	844	864
40°	815	843	875
45°	802	843	895
50°	784	849	921
55°	764	862	962
60°	732	879	1016
65°	685	910	1078
70°	623	952	1160
75°	528	1004	1212
80°	417	1011	980
85°	307	769	861



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	3.0
10°-20°	172.4	8.6
20°-30°	263.6	13.1
30°-40°	322.3	16.0
40°-50°	343.5	17.1
50°-60°	328.4	16.4
60°-70°	278.2	13.9
70°-80°	187.0	9.3
80°-90°	52.7	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°	495.9	24.7
0°-40°	818.2	40.7
0°-60°	1490.1	74.2
0°-90°	2008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	632	632	632	632	632	
5°	632	630	628	630	630	60
15°	610	610	609	614	612	172
25°	566	568	572	577	578	261
35°	502	506	514	524	526	314
45°	421	428	443	462	470	325
55°	326	338	368	396	410	290
65°	215	237	286	324	339	214
75°	102	138	193	226	233	109
85°	20	41	50	54	56	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	631.5	631.5	631.5	631.5	631.5
2.5°	632.5	632.5	629.5	631.5	631.5
5°	631.5	630.5	627.5	630.5	630.5
7.5°	628.5	627.5	625.5	628.5	627.5
10°	622.5	622.5	620.5	623.5	623.5
12.5°	617.5	616.5	615.5	619.5	618.5
15°	609.5	609.5	608.6	613.5	612.5
17.5°	599.6	600.6	601.6	605.6	606.6
20°	588.6	590.6	591.6	597.6	597.6
22.5°	578.7	579.7	581.7	587.6	587.6
25°	565.7	567.7	571.7	576.7	577.7
27.5°	552.8	553.8	558.8	565.7	566.7
30°	535.8	538.8	544.8	552.8	553.8
32.5°	520.9	523.9	530.9	538.8	540.8
35°	502.0	506.0	513.9	523.9	525.9
37.5°	485.0	488.0	498.0	509.0	511.9
40°	464.1	470.1	480.1	493.0	498.0
42.5°	443.2	449.2	461.1	478.1	484.1
45°	421.3	428.3	443.2	462.1	470.1
47.5°	399.4	407.4	424.3	446.2	455.2
50°	374.5	384.5	405.4	430.3	440.2
52.5°	350.6	362.5	385.4	413.3	426.3
55°	325.7	337.6	367.5	396.4	410.3
57.5°	297.8	313.7	346.6	379.5	394.4
60°	271.9	286.8	326.7	362.5	377.5
62.5°	244.0	263.9	306.8	344.6	359.6
65°	215.1	237.0	285.8	323.7	338.6
67.5°	189.2	213.1	264.9	302.8	317.7
70°	158.4	188.2	242.0	279.9	294.8
72.5°	129.5	162.3	218.1	255.0	268.9
75°	101.6	138.4	193.2	226.1	233.1
77.5°	75.7	114.5	167.3	181.3	176.3
80°	53.8	91.6	130.5	123.5	126.5
82.5°	34.9	69.7	80.7	91.6	94.6
85°	19.9	40.8	49.8	53.8	55.8
87.5°	9.0	14.9	19.9	19.9	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)