

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: P313485

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP250-W2A-U-3000K**

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: P313485
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 1898.0 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

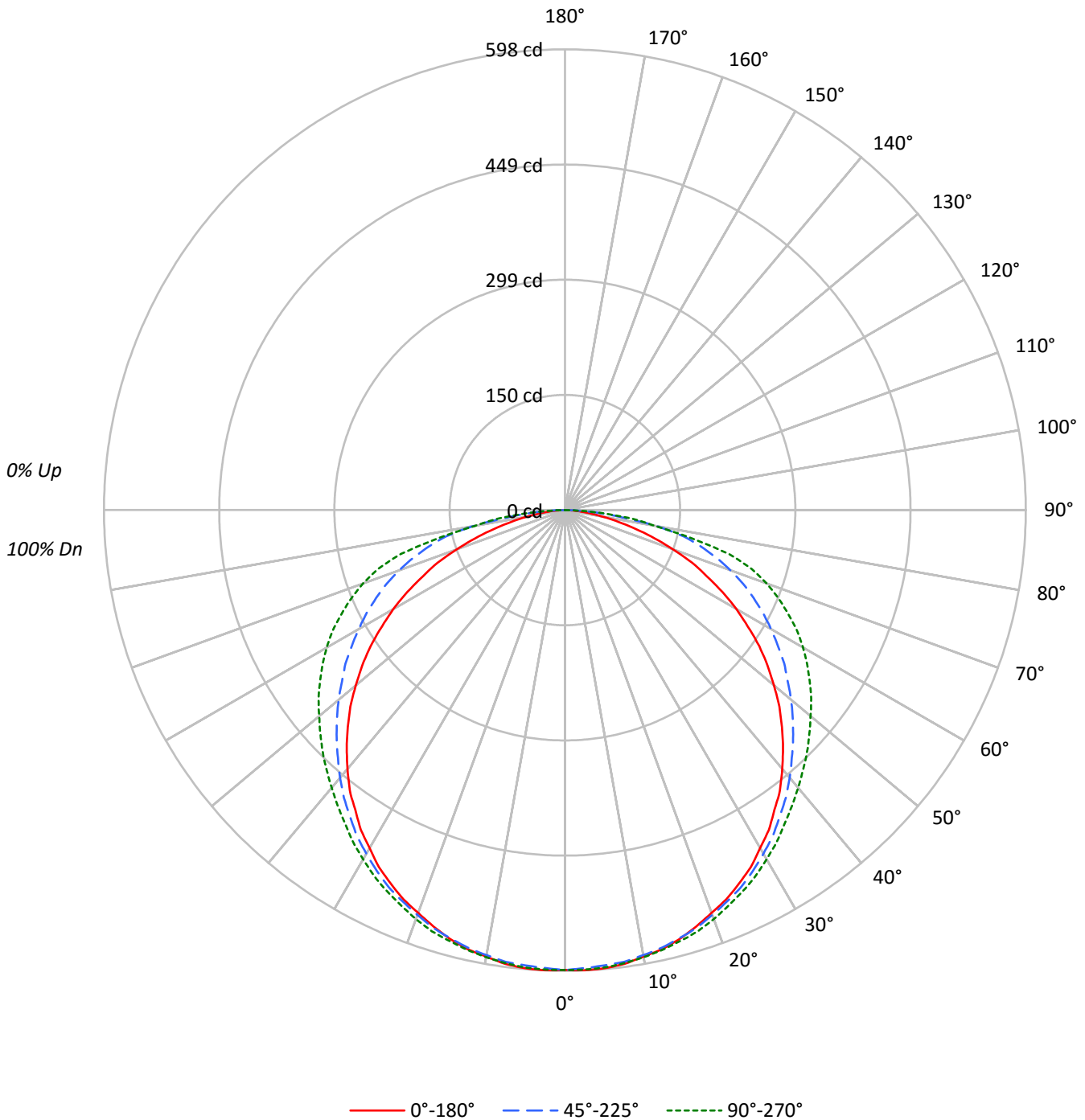
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	67	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°	803	803	803
5°	806	801	805
10°	804	801	805
15°	803	801	807
20°	797	801	809
25°	794	802	811
30°	787	800	813
35°	779	798	817
40°	771	797	827
45°	758	797	846
50°	741	802	871
55°	722	815	910
60°	692	831	960
65°	647	860	1019
70°	589	900	1096
75°	499	949	1145
80°	394	955	927
85°	290	727	814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.6	3.0
10°-20°	162.9	8.6
20°-30°	249.2	13.1
30°-40°	304.6	16.0
40°-50°	324.7	17.1
50°-60°	310.4	16.4
60°-70°	263.0	13.9
70°-80°	176.7	9.3
80°-90°	49.8	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°	468.7	24.7
0°-40°	773.4	40.7
0°-60°	1408.4	74.2
0°-90°	1898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	597	597	597	597	597	
5°	597	596	593	596	596	57
15°	576	576	575	580	579	162
25°	535	537	540	545	546	246
35°	474	478	486	495	497	297
45°	398	405	419	437	444	307
55°	308	319	347	375	388	274
65°	203	224	270	306	320	202
75°	96	131	183	214	220	103
85°	19	39	47	51	53	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	596.9	596.9	596.9	596.9	596.9
2.5°	597.8	597.8	595.0	596.9	596.9
5°	596.9	595.9	593.1	595.9	595.9
7.5°	594.0	593.1	591.2	594.0	593.1
10°	588.4	588.4	586.5	589.3	589.3
12.5°	583.7	582.7	581.8	585.6	584.6
15°	576.2	576.2	575.2	579.9	579.0
17.5°	566.7	567.7	568.6	572.4	573.3
20°	556.4	558.3	559.2	564.9	564.9
22.5°	547.0	547.9	549.8	555.4	555.4
25°	534.7	536.6	540.4	545.1	546.0
27.5°	522.5	523.4	528.1	534.7	535.7
30°	506.5	509.3	515.0	522.5	523.4
32.5°	492.4	495.2	501.8	509.3	511.2
35°	474.5	478.2	485.8	495.2	497.1
37.5°	458.5	461.3	470.7	481.1	483.9
40°	438.7	444.4	453.8	466.0	470.7
42.5°	418.9	424.6	435.9	451.9	457.5
45°	398.2	404.8	418.9	436.8	444.4
47.5°	377.5	385.0	401.0	421.8	430.2
50°	354.0	363.4	383.2	406.7	416.1
52.5°	331.4	342.7	364.3	390.7	402.9
55°	307.8	319.1	347.4	374.7	387.9
57.5°	281.5	296.6	327.6	358.7	372.8
60°	257.0	271.1	308.8	342.7	356.8
62.5°	230.7	249.5	290.0	325.7	339.9
65°	203.3	224.1	270.2	306.0	320.1
67.5°	178.9	201.5	250.4	286.2	300.3
70°	149.7	177.9	228.8	264.5	278.7
72.5°	122.4	153.5	206.2	241.0	254.2
75°	96.0	130.9	182.6	213.7	220.3
77.5°	71.5	108.3	158.2	171.3	166.6
80°	50.8	86.6	123.3	116.7	119.6
82.5°	33.0	65.9	76.3	86.6	89.4
85°	18.8	38.6	47.1	50.8	52.7
87.5°	8.5	14.1	18.8	18.8	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)