

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: P309949

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP250-W2A-U-6500K**

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: P309949
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-L82765-RDP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 2099.0 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

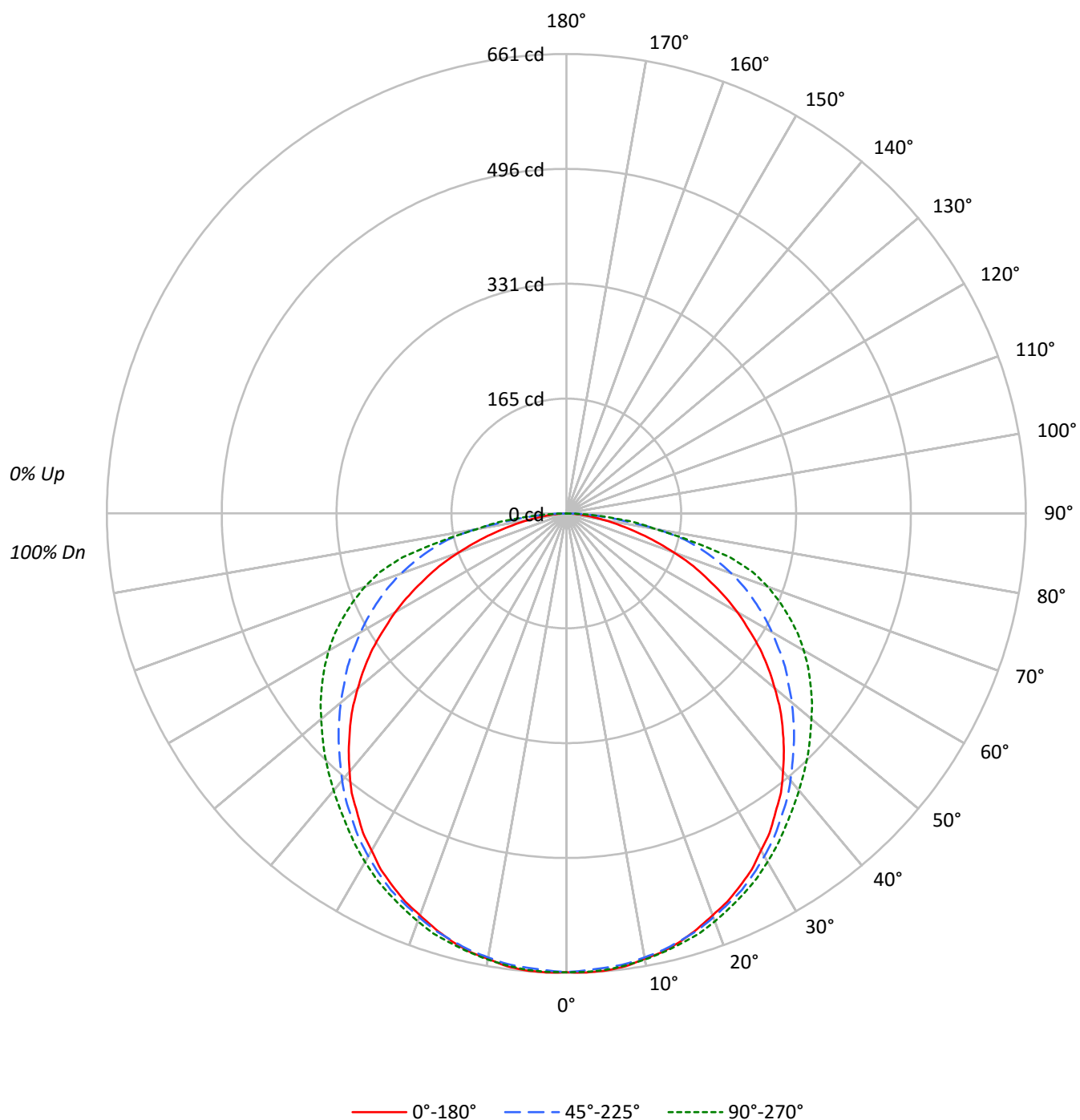
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	888	888	888
5°	892	886	890
10°	889	886	890
15°	888	886	892
20°	881	885	894
25°	878	887	897
30°	870	885	899
35°	862	882	903
40°	852	881	914
45°	838	882	935
50°	819	887	963
55°	799	901	1006
60°	765	919	1062
65°	716	951	1127
70°	651	995	1212
75°	552	1050	1266
80°	435	1057	1024
85°	321	804	900



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	3.0
10°-20°	180.2	8.6
20°-30°	275.6	13.1
30°-40°	336.9	16.0
40°-50°	359.0	17.1
50°-60°	343.3	16.4
60°-70°	290.8	13.9
70°-80°	195.4	9.3
80°-90°	55.1	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°	518.4	24.7
0°-40°	855.3	40.7
0°-60°	1557.6	74.2
0°-90°	2099.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2099.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	660	659	656	659	659	63
15°	637	637	636	641	640	180
25°	591	593	598	603	604	273
35°	525	529	537	548	550	329
45°	440	448	463	483	491	340
55°	340	353	384	414	429	303
65°	225	248	299	338	354	223
75°	106	145	202	236	244	114
85°	21	43	52	56	58	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	660.1	660.1	660.1	660.1	660.1
2.5°	661.1	661.1	658.0	660.1	660.1
5°	660.1	659.0	655.9	659.0	659.0
7.5°	657.0	655.9	653.8	657.0	655.9
10°	650.7	650.7	648.6	651.7	651.7
12.5°	645.5	644.5	643.4	647.6	646.5
15°	637.2	637.2	636.1	641.3	640.3
17.5°	626.8	627.8	628.8	633.0	634.0
20°	615.3	617.4	618.4	624.7	624.7
22.5°	604.9	605.9	608.0	614.3	614.3
25°	591.4	593.4	597.6	602.8	603.9
27.5°	577.8	578.9	584.1	591.4	592.4
30°	560.1	563.3	569.5	577.8	578.9
32.5°	544.5	547.6	554.9	563.3	565.3
35°	524.7	528.9	537.2	547.6	549.7
37.5°	507.0	510.2	520.6	532.0	535.1
40°	485.2	491.4	501.8	515.4	520.6
42.5°	463.3	469.5	482.0	499.7	506.0
45°	440.4	447.7	463.3	483.1	491.4
47.5°	417.5	425.8	443.5	466.4	475.8
50°	391.5	401.9	423.7	449.8	460.2
52.5°	366.5	379.0	402.9	432.1	445.6
55°	340.4	352.9	384.2	414.4	428.9
57.5°	311.3	328.0	362.3	396.7	412.3
60°	284.2	299.8	341.5	379.0	394.6
62.5°	255.1	275.9	320.7	360.2	375.8
65°	224.9	247.8	298.8	338.4	354.0
67.5°	197.8	222.8	276.9	316.5	332.1
70°	165.5	196.8	253.0	292.6	308.2
72.5°	135.3	169.7	228.0	266.5	281.1
75°	106.2	144.7	202.0	236.3	243.6
77.5°	79.1	119.7	174.9	189.5	184.3
80°	56.2	95.8	136.4	129.1	132.2
82.5°	36.4	72.9	84.3	95.8	98.9
85°	20.8	42.7	52.1	56.2	58.3
87.5°	9.4	15.6	20.8	20.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)