

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: P310034

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP250-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: P310034
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: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2320.0 lumens
Efficiency: N/A
Efficacy: 75.3 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

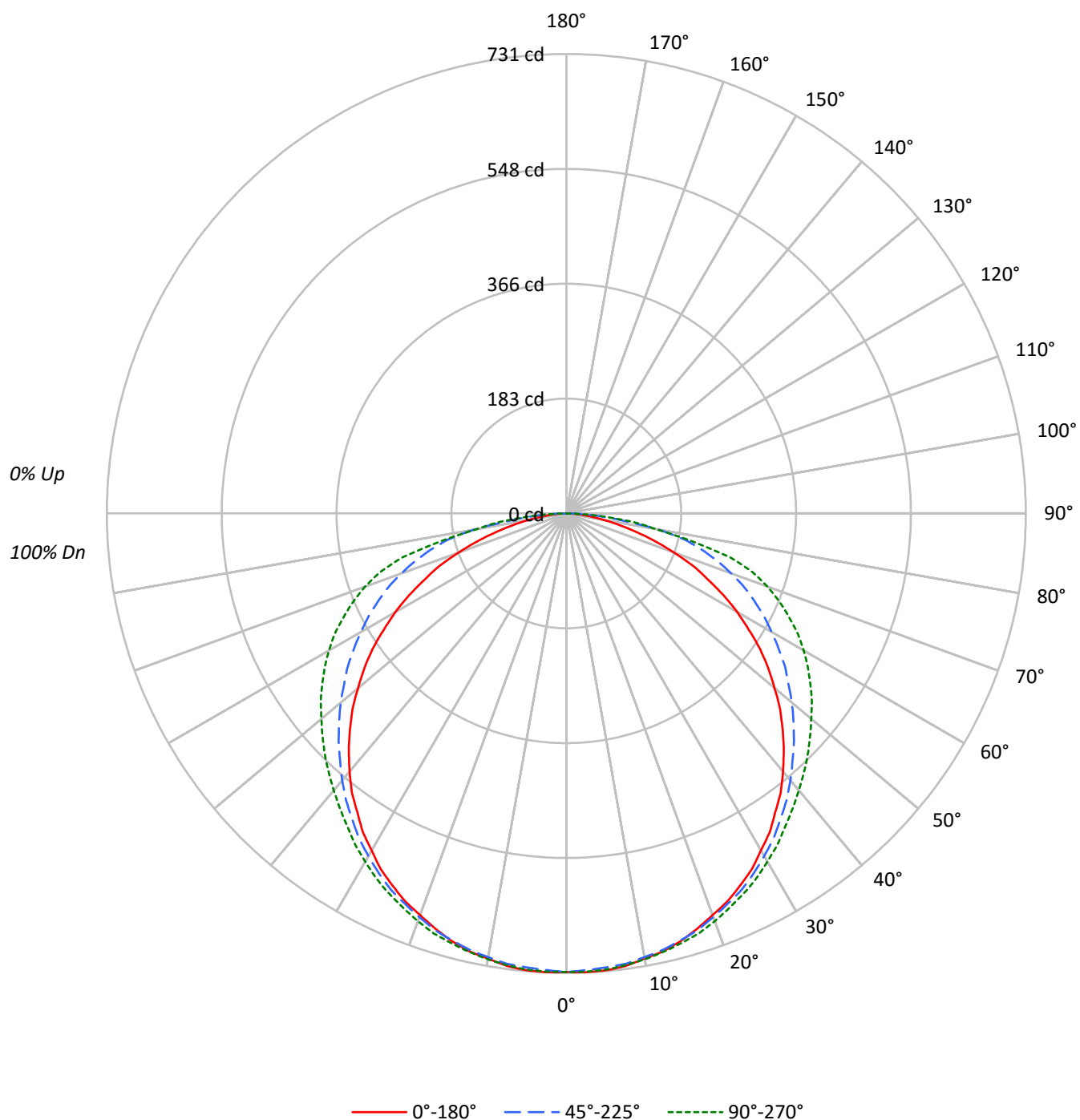
Input Watts (W): 30.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	982	982	982
5°	985	979	984
10°	983	979	984
15°	981	979	986
20°	974	979	989
25°	970	981	991
30°	962	978	994
35°	953	975	998
40°	942	974	1011
45°	926	974	1034
50°	906	980	1065
55°	883	996	1112
60°	846	1016	1174
65°	791	1052	1246
70°	720	1100	1340
75°	610	1160	1400
80°	481	1168	1132
85°	355	888	994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	3.0
10°-20°	199.2	8.6
20°-30°	304.6	13.1
30°-40°	372.4	16.0
40°-50°	396.9	17.1
50°-60°	379.4	16.4
60°-70°	321.4	13.9
70°-80°	216.0	9.3
80°-90°	60.9	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°	573.0	24.7
0°-40°	945.3	40.7
0°-60°	1721.6	74.2
0°-90°	2320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	730	730	730	730	730	
5°	730	728	725	728	728	69
15°	704	704	703	709	708	199
25°	654	656	660	666	667	301
35°	580	585	594	605	608	363
45°	487	495	512	534	543	375
55°	376	390	425	458	474	335
65°	249	274	330	374	391	247
75°	117	160	223	261	269	126
85°	23	47	58	62	64	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	729.6	729.6	729.6	729.6	729.6
2.5°	730.7	730.7	727.3	729.6	729.6
5°	729.6	728.4	725.0	728.4	728.4
7.5°	726.1	725.0	722.7	726.1	725.0
10°	719.2	719.2	716.9	720.4	720.4
12.5°	713.5	712.3	711.2	715.8	714.6
15°	704.3	704.3	703.1	708.9	707.7
17.5°	692.7	693.9	695.1	699.7	700.8
20°	680.1	682.4	683.5	690.4	690.4
22.5°	668.6	669.7	672.0	678.9	678.9
25°	653.6	655.9	660.5	666.3	667.4
27.5°	638.7	639.8	645.6	653.6	654.8
30°	619.1	622.6	629.5	638.7	639.8
32.5°	601.8	605.3	613.3	622.6	624.9
35°	580.0	584.6	593.8	605.3	607.6
37.5°	560.4	563.9	575.4	588.0	591.5
40°	536.2	543.2	554.7	569.6	575.4
42.5°	512.1	519.0	532.8	552.4	559.3
45°	486.8	494.8	512.1	533.9	543.2
47.5°	461.4	470.7	490.2	515.5	525.9
50°	432.7	444.2	468.4	497.1	508.6
52.5°	405.1	418.9	445.3	477.6	492.5
55°	376.3	390.1	424.6	458.0	474.1
57.5°	344.1	362.5	400.5	438.4	455.7
60°	314.2	331.4	377.4	418.9	436.1
62.5°	281.9	304.9	354.4	398.2	415.4
65°	248.6	273.9	330.3	374.0	391.3
67.5°	218.6	246.3	306.1	349.8	367.1
70°	183.0	217.5	279.6	323.4	340.6
72.5°	149.6	187.6	252.0	294.6	310.7
75°	117.4	160.0	223.2	261.2	269.3
77.5°	87.5	132.3	193.3	209.4	203.7
80°	62.1	105.9	150.7	142.7	146.1
82.5°	40.3	80.6	93.2	105.9	109.3
85°	23.0	47.2	57.5	62.1	64.4
87.5°	10.4	17.3	23.0	23.0	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)