

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: P309224

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-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: P309224
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L82765-HRP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 1949.0 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

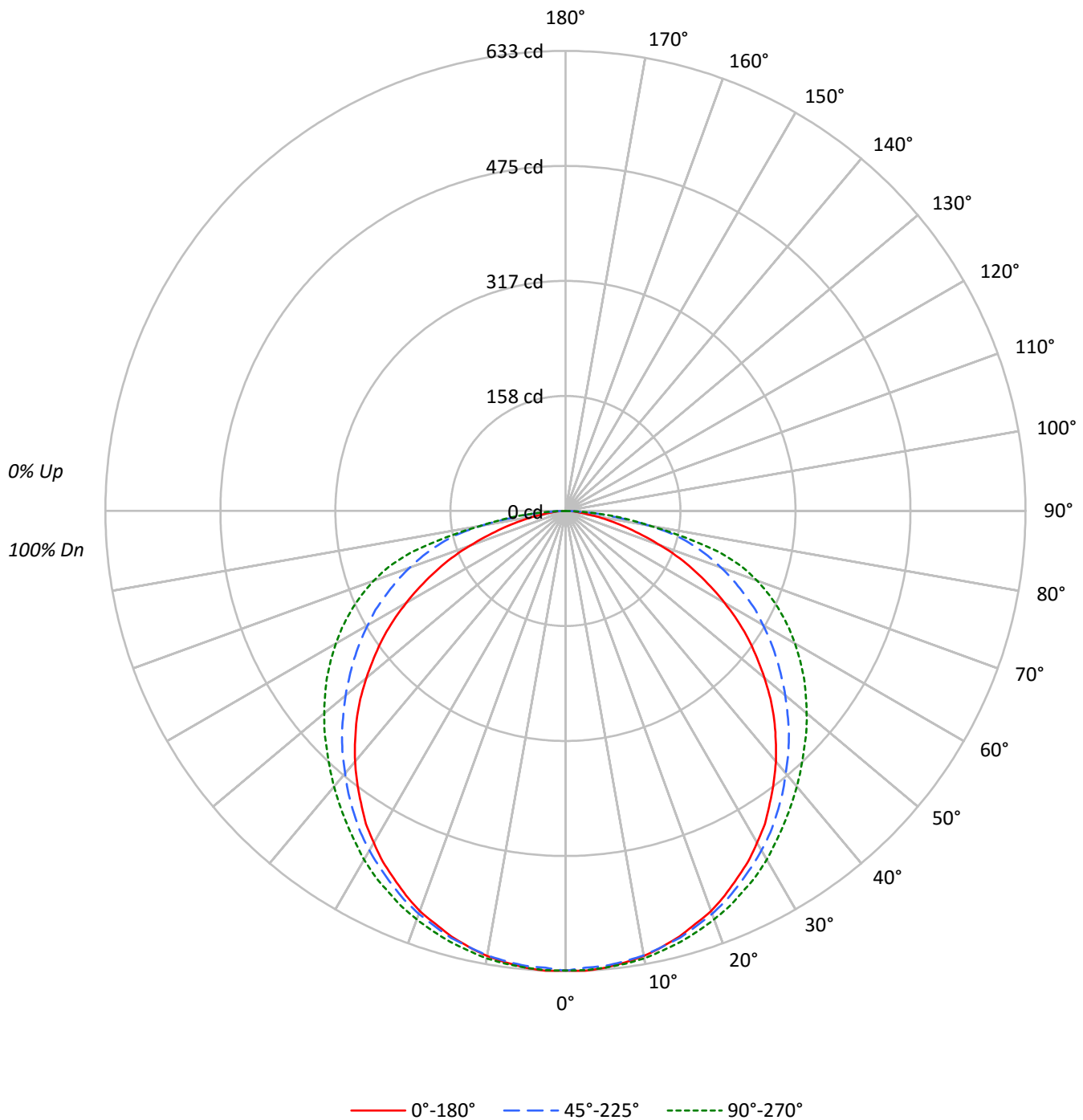
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	851	851	851
5°	852	849	852
10°	849	848	854
15°	844	847	855
20°	839	845	856
25°	829	841	858
30°	819	838	861
35°	806	834	862
40°	791	828	870
45°	773	828	883
50°	748	827	907
55°	722	833	940
60°	681	845	981
65°	629	865	1037
70°	549	895	1104
75°	446	941	1141
80°	329	923	923
85°	252	681	769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	3.1
10°-20°	172.0	8.8
20°-30°	261.9	13.4
30°-40°	318.0	16.3
40°-50°	336.0	17.2
50°-60°	317.0	16.3
60°-70°	263.6	13.5
70°-80°	173.4	8.9
80°-90°	47.3	2.4
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°	493.8	25.3
0°-40°	811.8	41.7
0°-60°	1464.7	75.2
0°-90°	1949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	632	632	632	632	632	
5°	631	631	628	631	631	60
15°	606	607	608	614	614	171
25°	558	561	566	576	578	257
35°	490	496	508	521	525	307
45°	406	414	435	456	464	313
55°	308	321	355	388	401	274
65°	198	220	272	312	326	195
75°	86	125	181	215	220	92
85°	16	36	44	49	50	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	632.4	632.4	632.4	632.4	632.4
2.5°	633.2	632.4	629.1	632.4	632.4
5°	630.7	630.7	628.3	630.7	630.7
7.5°	626.6	626.6	625.0	628.3	628.3
10°	621.7	621.7	620.9	625.0	625.0
12.5°	614.4	615.2	614.4	619.3	619.3
15°	606.2	607.1	607.9	613.6	613.6
17.5°	595.6	597.3	598.9	605.4	606.2
20°	585.8	586.7	589.9	597.3	598.1
22.5°	572.8	575.2	579.3	586.7	589.1
25°	558.1	561.4	566.3	576.1	577.7
27.5°	544.2	546.7	553.2	563.8	567.1
30°	527.1	531.2	539.3	549.9	554.0
32.5°	510.8	514.9	524.7	536.1	539.3
35°	490.4	496.1	507.5	520.6	524.7
37.5°	470.8	476.5	490.4	505.1	510.0
40°	450.4	456.9	471.6	488.7	495.3
42.5°	428.4	437.3	453.7	472.4	479.8
45°	406.3	414.5	434.9	456.1	464.3
47.5°	382.7	392.5	414.5	439.8	449.6
50°	357.4	369.6	394.9	422.7	433.3
52.5°	332.1	346.0	374.5	405.5	416.9
55°	307.6	320.7	354.9	388.4	400.6
57.5°	280.7	297.0	334.5	370.4	382.7
60°	252.9	270.9	314.1	351.7	364.7
62.5°	225.2	245.6	294.6	332.1	346.0
65°	197.5	220.3	271.7	311.7	325.6
67.5°	170.5	195.8	250.5	290.5	304.3
70°	139.5	171.3	227.6	266.8	280.7
72.5°	111.0	147.7	205.6	242.3	254.6
75°	85.7	124.8	181.1	214.6	219.5
77.5°	62.8	102.0	155.8	167.3	168.1
80°	42.4	81.6	119.1	117.5	119.1
82.5°	27.7	61.2	75.1	84.0	84.9
85°	16.3	35.9	44.1	49.0	49.8
87.5°	8.2	12.2	15.5	16.3	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)