

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: P309856

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-5000K**

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: P309856  
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: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 5000K 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: 1804.0 lumens  
Efficiency: N/A  
Efficacy: 83.5 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

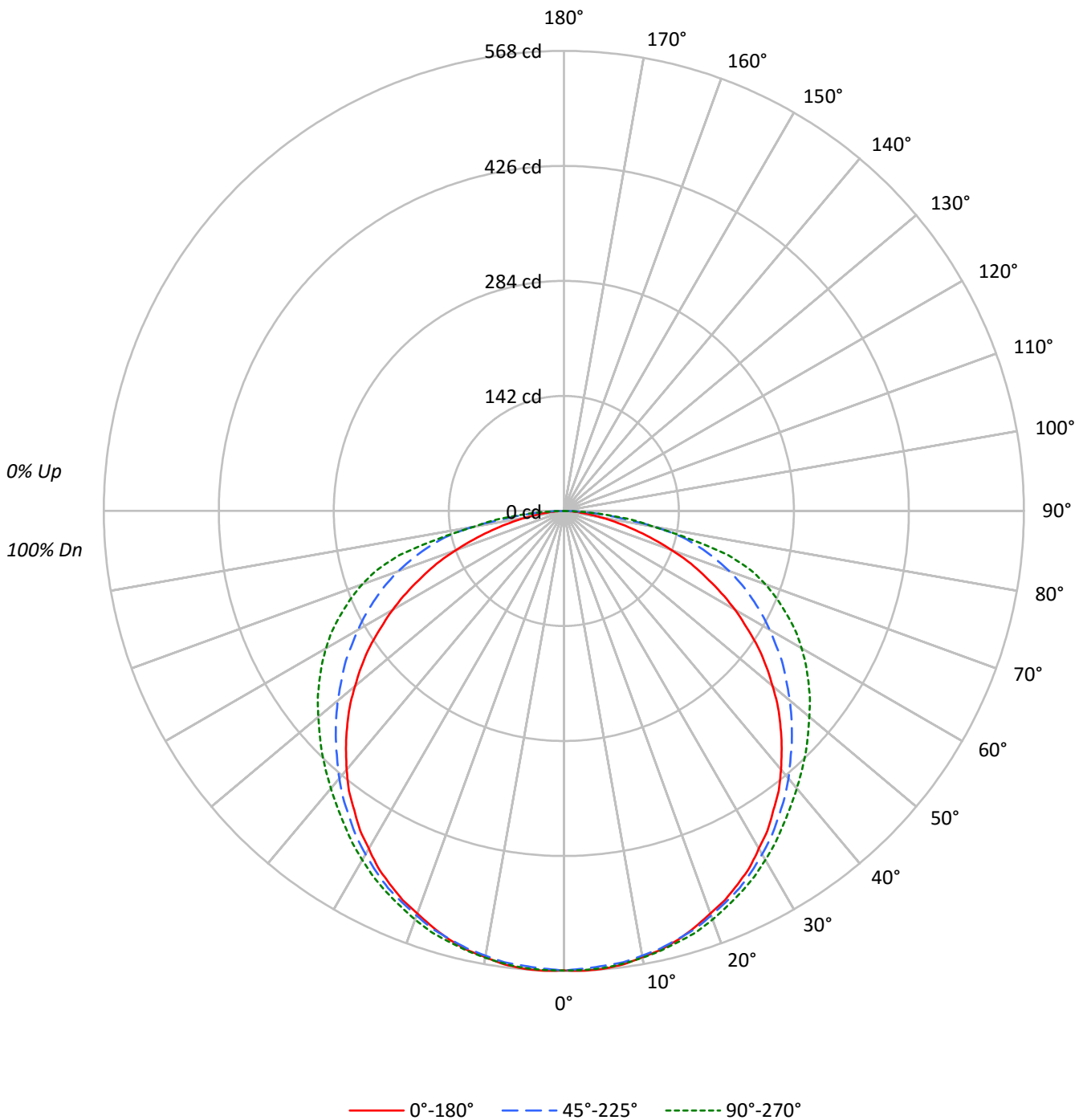
Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	763	763	763
5°	766	761	765
10°	764	762	765
15°	763	762	767
20°	757	761	769
25°	754	762	770
30°	748	761	773
35°	741	758	776
40°	732	758	786
45°	720	758	804
50°	704	762	828
55°	686	775	865
60°	657	790	913
65°	615	818	968
70°	560	855	1042
75°	475	902	1089
80°	374	908	880
85°	276	690	773



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.8	3.0
10°-20°	154.9	8.6
20°-30°	236.8	13.1
30°-40°	289.5	16.0
40°-50°	308.6	17.1
50°-60°	295.0	16.4
60°-70°	249.9	13.9
70°-80°	168.0	9.3
80°-90°	47.4	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°	445.5	24.7
0°-40°	735.1	40.7
0°-60°	1338.7	74.2
0°-90°	1804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1804.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	566	564	566	566	54
15°	548	548	547	551	550	154
25°	508	510	514	518	519	234
35°	451	455	462	471	472	283
45°	378	385	398	415	422	292
55°	293	303	330	356	369	261
65°	193	213	257	291	304	192
75°	91	124	174	203	209	98
85°	18	37	45	48	50	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	567.3	567.3	567.3	567.3	567.3
2.5°	568.2	568.2	565.5	567.3	567.3
5°	567.3	566.4	563.7	566.4	566.4
7.5°	564.6	563.7	561.9	564.6	563.7
10°	559.3	559.3	557.5	560.1	560.1
12.5°	554.8	553.9	553.0	556.6	555.7
15°	547.6	547.6	546.7	551.2	550.3
17.5°	538.7	539.6	540.5	544.0	544.9
20°	528.8	530.6	531.5	536.9	536.9
22.5°	519.9	520.8	522.6	527.9	527.9
25°	508.2	510.0	513.6	518.1	519.0
27.5°	496.6	497.5	502.0	508.2	509.1
30°	481.4	484.1	489.5	496.6	497.5
32.5°	468.0	470.7	476.9	484.1	485.9
35°	451.0	454.6	461.7	470.7	472.5
37.5°	435.8	438.5	447.4	457.2	459.9
40°	417.0	422.3	431.3	442.9	447.4
42.5°	398.2	403.6	414.3	429.5	434.9
45°	378.5	384.8	398.2	415.2	422.3
47.5°	358.8	366.0	381.2	400.9	408.9
50°	336.4	345.4	364.2	386.6	395.5
52.5°	315.0	325.7	346.3	371.3	383.0
55°	292.6	303.3	330.2	356.1	368.7
57.5°	267.5	281.9	311.4	340.9	354.3
60°	244.3	257.7	293.5	325.7	339.1
62.5°	219.2	237.1	275.6	309.6	323.0
65°	193.3	213.0	256.8	290.8	304.2
67.5°	170.0	191.5	238.0	272.0	285.4
70°	142.3	169.1	217.4	251.4	264.9
72.5°	116.3	145.9	196.0	229.1	241.6
75°	91.3	124.4	173.6	203.1	209.4
77.5°	68.0	102.9	150.3	162.9	158.4
80°	48.3	82.3	117.2	111.0	113.6
82.5°	31.3	62.6	72.5	82.3	85.0
85°	17.9	36.7	44.7	48.3	50.1
87.5°	8.1	13.4	17.9	17.9	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)