

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: P309897

Luminaire Tested: **24FCZ2-30-UNV-L82765-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: P309897  
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: 24FCZ2-30-UNV-L82765-RDP-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (168) 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**

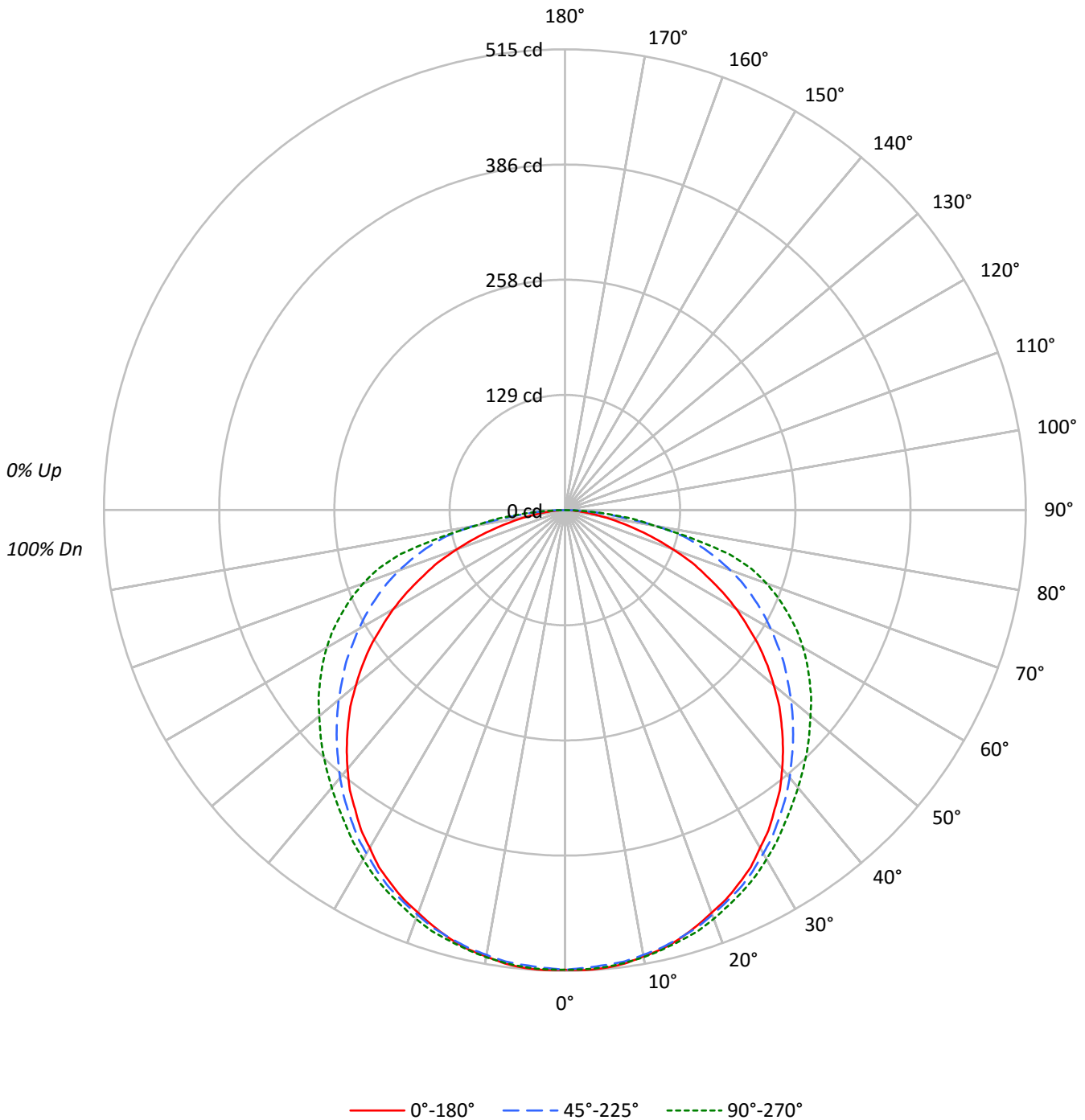
Lumens per Lamp: N/A  
Luminaire Lumens: 1634.0 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P309897

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CP250-W2A-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P309897

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CP250-W2A-U-3000K

**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°	691	691	691
5°	694	690	693
10°	692	690	693
15°	691	690	694
20°	686	689	696
25°	684	691	698
30°	677	689	700
35°	671	687	703
40°	663	686	712
45°	652	686	728
50°	638	691	750
55°	622	702	783
60°	596	715	827
65°	557	741	877
70°	507	775	944
75°	430	817	986
80°	339	823	797
85°	250	625	701



TEST NUMBER: P309897

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CP250-W2A-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.7	3.0
10°-20°	140.3	8.6
20°-30°	214.5	13.1
30°-40°	262.2	16.0
40°-50°	279.5	17.1
50°-60°	267.2	16.4
60°-70°	226.4	13.9
70°-80°	152.2	9.3
80°-90°	42.9	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°	403.5	24.7
0°-40°	665.8	40.7
0°-60°	1212.5	74.2
0°-90°	1634.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1634.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	514	514	514	514	514	
5°	514	513	511	513	513	49
15°	496	496	495	499	498	140
25°	460	462	465	469	470	212
35°	408	412	418	426	428	256
45°	343	348	361	376	382	264
55°	265	275	299	323	334	236
65°	175	193	233	263	276	174
75°	83	113	157	184	190	89
85°	16	33	40	44	45	20
90°	0	0	0	0	0	



TEST NUMBER: P309897

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CP250-W2A-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	513.8	513.8	513.8	513.8	513.8
2.5°	514.7	514.7	512.2	513.8	513.8
5°	513.8	513.0	510.6	513.0	513.0
7.5°	511.4	510.6	509.0	511.4	510.6
10°	506.6	506.6	504.9	507.4	507.4
12.5°	502.5	501.7	500.9	504.1	503.3
15°	496.0	496.0	495.2	499.3	498.4
17.5°	487.9	488.7	489.5	492.8	493.6
20°	479.0	480.6	481.4	486.3	486.3
22.5°	470.9	471.7	473.3	478.2	478.2
25°	460.4	462.0	465.2	469.3	470.1
27.5°	449.8	450.6	454.7	460.4	461.2
30°	436.0	438.5	443.3	449.8	450.6
32.5°	423.9	426.3	432.0	438.5	440.1
35°	408.5	411.7	418.2	426.3	427.9
37.5°	394.7	397.1	405.2	414.2	416.6
40°	377.7	382.5	390.7	401.2	405.2
42.5°	360.7	365.5	375.3	389.0	393.9
45°	342.8	348.5	360.7	376.1	382.5
47.5°	325.0	331.5	345.3	363.1	370.4
50°	304.7	312.8	329.9	350.1	358.2
52.5°	285.3	295.0	313.7	336.4	346.9
55°	265.0	274.8	299.1	322.6	333.9
57.5°	242.3	255.3	282.0	308.8	321.0
60°	221.3	233.4	265.8	295.0	307.2
62.5°	198.6	214.8	249.6	280.4	292.6
65°	175.1	192.9	232.6	263.4	275.6
67.5°	154.0	173.4	215.6	246.4	258.5
70°	128.9	153.2	196.9	227.7	239.9
72.5°	105.4	132.1	177.5	207.5	218.8
75°	82.7	112.7	157.2	184.0	189.7
77.5°	61.6	93.2	136.2	147.5	143.5
80°	43.8	74.6	106.2	100.5	102.9
82.5°	28.4	56.7	65.6	74.6	77.0
85°	16.2	33.2	40.5	43.8	45.4
87.5°	7.3	12.2	16.2	16.2	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)