

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: P309821

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CA08-W2A-U-5500K**

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: P309821  
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-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 5500K 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: 1963.0 lumens  
Efficiency: N/A  
Efficacy: 90.5 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

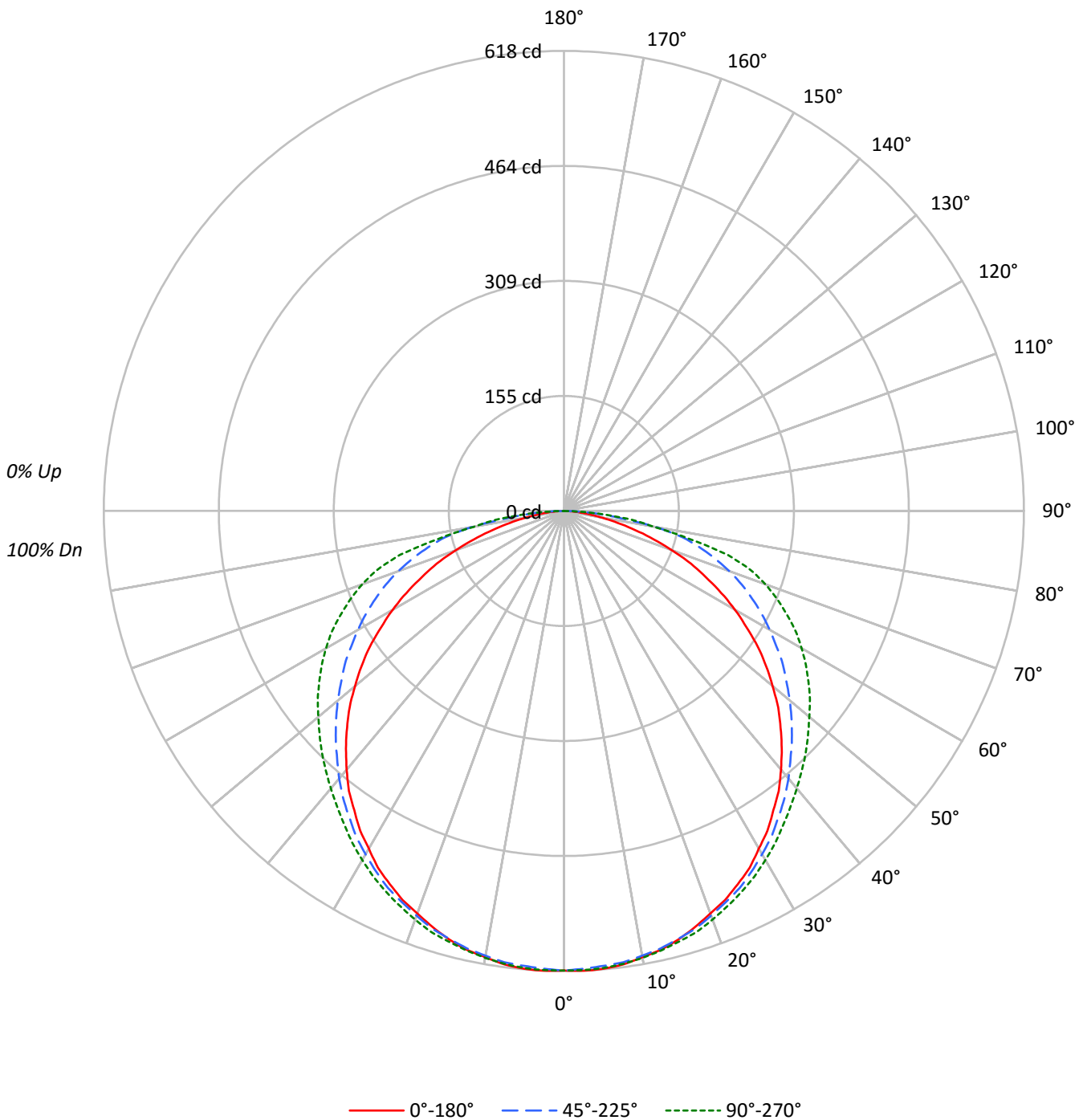
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	831	831	831
5°	834	828	832
10°	831	829	833
15°	830	829	834
20°	824	828	836
25°	821	830	838
30°	814	827	841
35°	806	825	844
40°	797	824	855
45°	784	824	875
50°	766	830	901
55°	747	843	941
60°	715	859	993
65°	670	890	1054
70°	609	931	1134
75°	516	982	1184
80°	408	989	958
85°	301	752	841



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.6	3.0
10°-20°	168.5	8.6
20°-30°	257.7	13.1
30°-40°	315.1	16.0
40°-50°	335.8	17.1
50°-60°	321.0	16.4
60°-70°	272.0	13.9
70°-80°	182.8	9.3
80°-90°	51.6	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°	484.8	24.7
0°-40°	799.9	40.7
0°-60°	1456.7	74.2
0°-90°	1963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1963.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	617	616	613	616	616	59
15°	596	596	595	600	599	168
25°	553	555	559	564	565	255
35°	491	495	502	512	514	307
45°	412	419	433	452	460	318
55°	318	330	359	388	401	284
65°	210	232	279	316	331	209
75°	99	135	189	221	228	106
85°	20	40	49	53	54	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	617.3	617.3	617.3	617.3	617.3
2.5°	618.3	618.3	615.4	617.3	617.3
5°	617.3	616.3	613.4	616.3	616.3
7.5°	614.4	613.4	611.5	614.4	613.4
10°	608.5	608.5	606.6	609.5	609.5
12.5°	603.7	602.7	601.7	605.6	604.6
15°	595.9	595.9	594.9	599.8	598.8
17.5°	586.1	587.1	588.1	592.0	593.0
20°	575.4	577.4	578.4	584.2	584.2
22.5°	565.7	566.7	568.6	574.5	574.5
25°	553.0	555.0	558.9	563.8	564.7
27.5°	540.4	541.4	546.2	553.0	554.0
30°	523.8	526.8	532.6	540.4	541.4
32.5°	509.2	512.2	519.0	526.8	528.7
35°	490.7	494.6	502.4	512.2	514.1
37.5°	474.2	477.1	486.8	497.5	500.5
40°	453.7	459.6	469.3	482.0	486.8
42.5°	433.3	439.1	450.8	467.4	473.2
45°	411.9	418.7	433.3	451.8	459.6
47.5°	390.4	398.2	414.8	436.2	445.0
50°	366.1	375.8	396.3	420.6	430.4
52.5°	342.7	354.4	376.8	404.1	416.7
55°	318.4	330.1	359.3	387.5	401.2
57.5°	291.1	306.7	338.8	371.0	385.6
60°	265.8	280.4	319.4	354.4	369.0
62.5°	238.5	258.0	299.9	336.9	351.5
65°	210.3	231.7	279.4	316.4	331.0
67.5°	185.0	208.4	259.0	296.0	310.6
70°	154.8	184.0	236.6	273.6	288.2
72.5°	126.6	158.7	213.2	249.3	262.9
75°	99.3	135.3	188.9	221.0	227.8
77.5°	74.0	112.0	163.6	177.2	172.3
80°	52.6	89.6	127.6	120.7	123.7
82.5°	34.1	68.2	78.9	89.6	92.5
85°	19.5	39.9	48.7	52.6	54.5
87.5°	8.8	14.6	19.5	19.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)