

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: P309862

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-3500K**

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: P309862
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 1821.0 lumens
Efficiency: N/A
Efficacy: 77.5 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

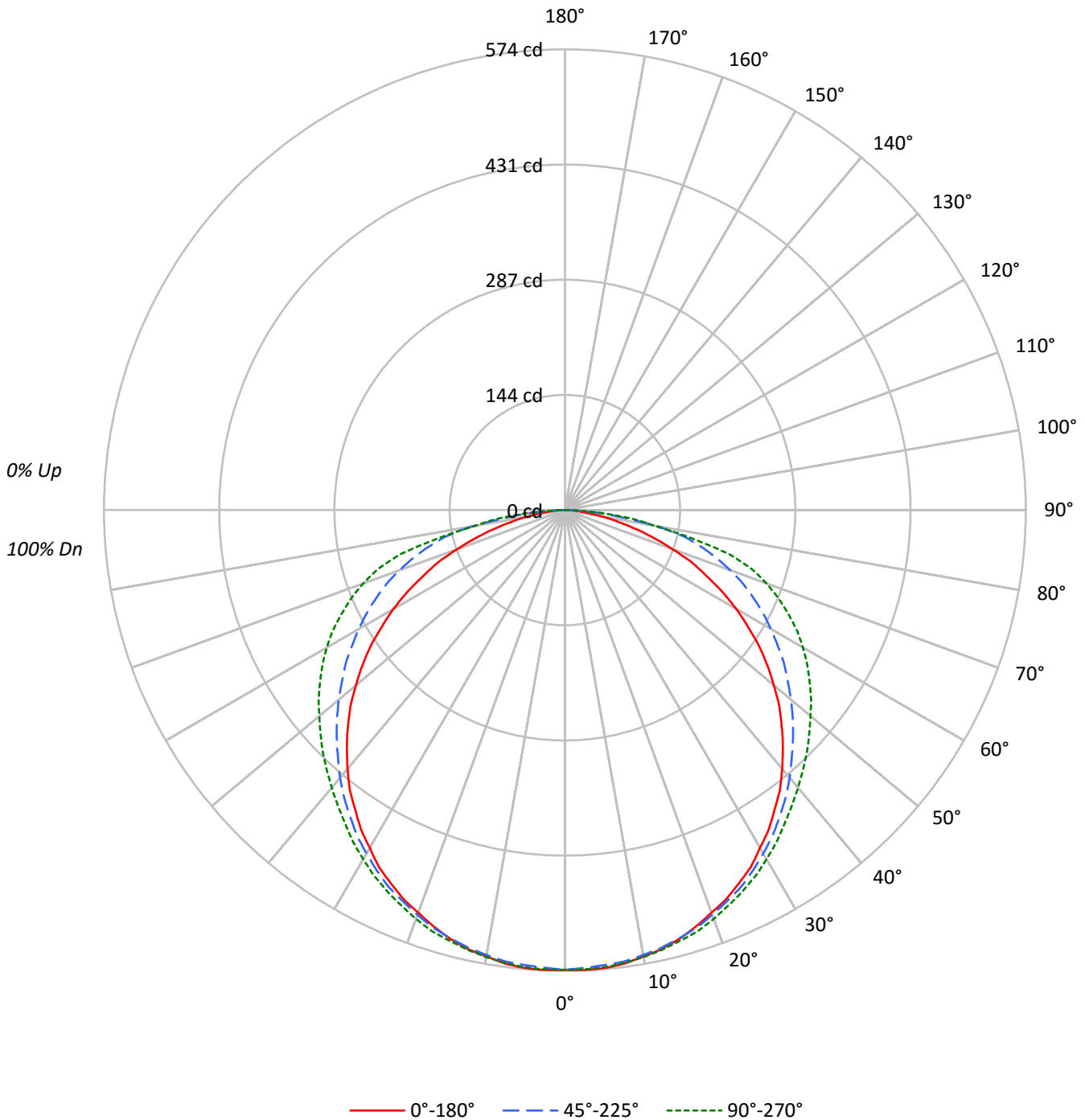
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309862

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P309862

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-3500K

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°	771	771	771
5°	774	769	772
10°	771	769	772
15°	770	769	774
20°	764	768	776
25°	762	770	778
30°	755	768	780
35°	748	766	783
40°	739	765	793
45°	727	765	811
50°	711	769	836
55°	693	782	873
60°	664	797	921
65°	621	825	978
70°	565	864	1052
75°	479	911	1099
80°	378	917	889
85°	279	698	781



TEST NUMBER: P309862

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.3	3.0
10°-20°	156.3	8.6
20°-30°	239.1	13.1
30°-40°	292.3	16.0
40°-50°	311.5	17.1
50°-60°	297.8	16.4
60°-70°	252.3	13.9
70°-80°	169.6	9.3
80°-90°	47.8	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°	449.7	24.7
0°-40°	742.0	40.7
0°-60°	1351.3	74.2
0°-90°	1821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	573	572	569	572	572	54
15°	553	553	552	556	556	156
25°	513	515	518	523	524	236
35°	455	459	466	475	477	285
45°	382	388	402	419	426	295
55°	295	306	333	360	372	263
65°	195	215	259	294	307	194
75°	92	126	175	205	211	99
85°	18	37	45	49	51	22
90°	0	0	0	0	0	



TEST NUMBER: P309862

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	572.7	572.7	572.7	572.7	572.7
2.5°	573.6	573.6	570.8	572.7	572.7
5°	572.7	571.7	569.0	571.7	571.7
7.5°	569.9	569.0	567.2	569.9	569.0
10°	564.5	564.5	562.7	565.4	565.4
12.5°	560.0	559.1	558.2	561.8	560.9
15°	552.8	552.8	551.9	556.4	555.5
17.5°	543.7	544.7	545.6	549.2	550.1
20°	533.8	535.6	536.5	541.9	541.9
22.5°	524.8	525.7	527.5	532.9	532.9
25°	513.0	514.8	518.5	523.0	523.9
27.5°	501.3	502.2	506.7	513.0	513.9
30°	485.9	488.7	494.1	501.3	502.2
32.5°	472.4	475.1	481.4	488.7	490.5
35°	455.2	458.8	466.1	475.1	476.9
37.5°	439.9	442.6	451.6	461.6	464.3
40°	420.9	426.3	435.4	447.1	451.6
42.5°	401.9	407.4	418.2	433.6	439.0
45°	382.1	388.4	401.9	419.1	426.3
47.5°	362.2	369.4	384.8	404.7	412.8
50°	339.6	348.6	367.6	390.2	399.2
52.5°	317.9	328.8	349.6	374.8	386.6
55°	295.4	306.2	333.3	359.5	372.1
57.5°	270.1	284.5	314.3	344.1	357.7
60°	246.6	260.1	296.3	328.8	342.3
62.5°	221.3	239.4	278.2	312.5	326.1
65°	195.1	215.0	259.2	293.6	307.1
67.5°	171.6	193.3	240.3	274.6	288.1
70°	143.6	170.7	219.5	253.8	267.4
72.5°	117.4	147.2	197.8	231.2	243.9
75°	92.1	125.5	175.2	205.0	211.4
77.5°	68.6	103.9	151.7	164.4	159.9
80°	48.8	83.1	118.3	112.0	114.7
82.5°	31.6	63.2	73.2	83.1	85.8
85°	18.1	37.0	45.2	48.8	50.6
87.5°	8.1	13.5	18.1	18.1	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)