

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: P309871

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA125-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: P309871
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" 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: 1815.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

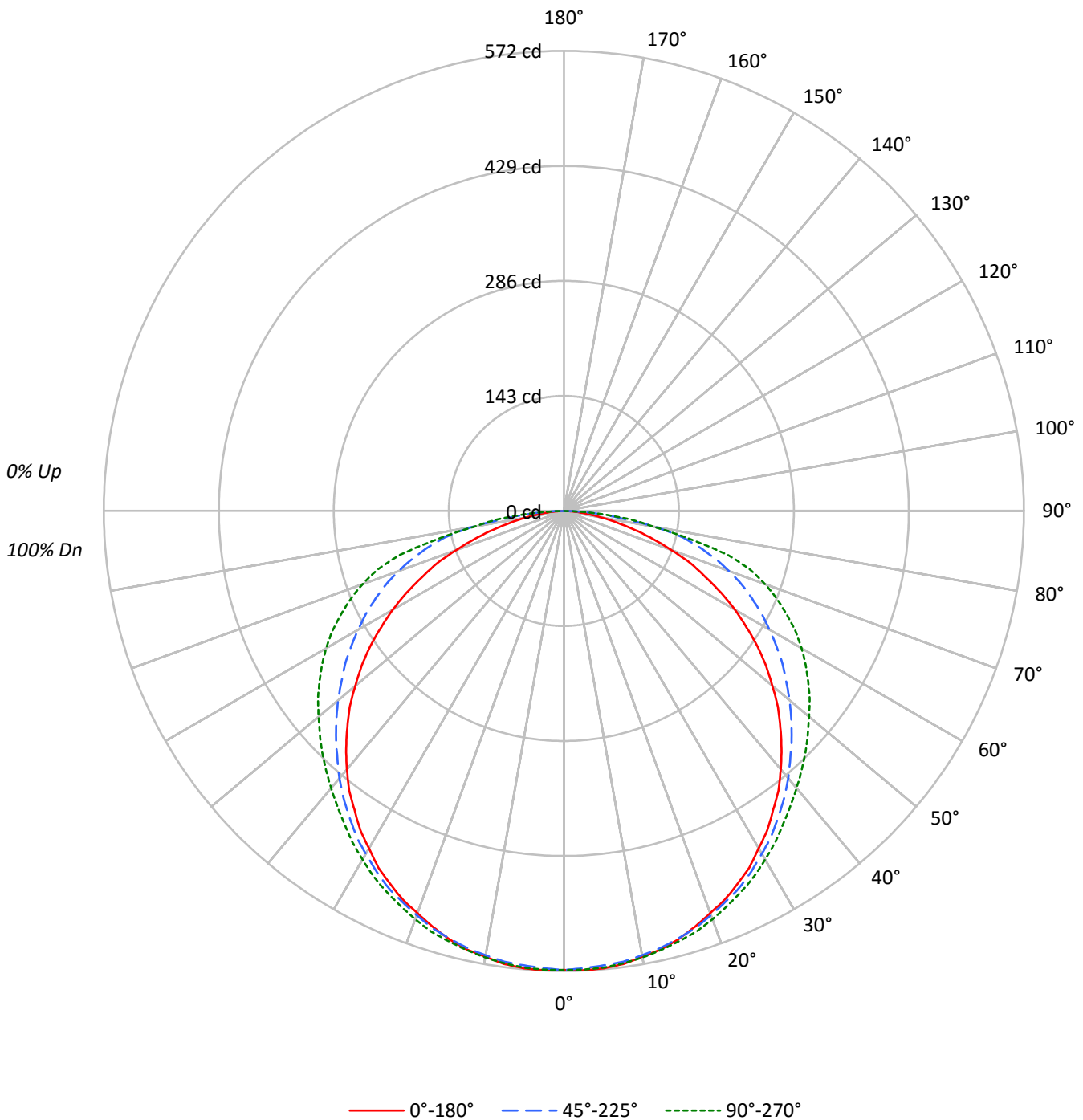
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309871

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P309871

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA125-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	68	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°	768	768	768
5°	771	766	770
10°	769	766	770
15°	768	766	771
20°	762	766	773
25°	759	767	775
30°	752	765	778
35°	745	763	781
40°	737	762	791
45°	725	762	809
50°	709	767	833
55°	691	779	870
60°	661	795	918
65°	619	823	975
70°	563	861	1048
75°	477	908	1095
80°	377	914	886
85°	278	695	778



TEST NUMBER: P309871

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.1	3.0
10°-20°	155.8	8.6
20°-30°	238.3	13.1
30°-40°	291.3	16.0
40°-50°	310.5	17.1
50°-60°	296.8	16.4
60°-70°	251.5	13.9
70°-80°	169.0	9.3
80°-90°	47.7	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°	448.3	24.7
0°-40°	739.5	40.7
0°-60°	1346.8	74.2
0°-90°	1815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1815.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	571	571	571	571	571	
5°	571	570	567	570	570	54
15°	551	551	550	555	554	155
25°	511	513	517	521	522	236
35°	454	457	464	474	475	284
45°	381	387	401	418	425	294
55°	294	305	332	358	371	262
65°	194	214	258	293	306	193
75°	92	125	175	204	211	98
85°	18	37	45	49	50	22
90°	0	0	0	0	0	



TEST NUMBER: P309871

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-RDP-CA125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	570.8	570.8	570.8	570.8	570.8
2.5°	571.7	571.7	569.0	570.8	570.8
5°	570.8	569.9	567.2	569.9	569.9
7.5°	568.1	567.2	565.4	568.1	567.2
10°	562.7	562.7	560.9	563.6	563.6
12.5°	558.2	557.3	556.4	560.0	559.1
15°	551.0	551.0	550.1	554.6	553.7
17.5°	542.0	542.9	543.8	547.4	548.3
20°	532.1	533.9	534.8	540.2	540.2
22.5°	523.1	524.0	525.8	531.2	531.2
25°	511.3	513.1	516.7	521.3	522.2
27.5°	499.6	500.5	505.0	511.3	512.2
30°	484.3	487.0	492.4	499.6	500.5
32.5°	470.8	473.5	479.8	487.0	488.8
35°	453.7	457.3	464.5	473.5	475.3
37.5°	438.4	441.1	450.1	460.0	462.7
40°	419.5	424.9	433.9	445.6	450.1
42.5°	400.6	406.0	416.8	432.1	437.5
45°	380.8	387.1	400.6	417.7	424.9
47.5°	361.0	368.2	383.5	403.3	411.4
50°	338.5	347.5	366.4	388.9	397.9
52.5°	316.9	327.7	348.4	373.6	385.3
55°	294.4	305.2	332.2	358.3	370.9
57.5°	269.2	283.6	313.3	343.0	356.5
60°	245.8	259.3	295.3	327.7	341.2
62.5°	220.6	238.6	277.3	311.5	325.0
65°	194.5	214.3	258.4	292.6	306.1
67.5°	171.0	192.7	239.5	273.7	287.2
70°	143.1	170.1	218.8	253.0	266.5
72.5°	117.0	146.7	197.2	230.5	243.1
75°	91.8	125.1	174.7	204.4	210.7
77.5°	68.4	103.5	151.2	163.8	159.3
80°	48.6	82.8	117.9	111.6	114.3
82.5°	31.5	63.0	72.9	82.8	85.5
85°	18.0	36.9	45.0	48.6	50.4
87.5°	8.1	13.5	18.0	18.0	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)