

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: P313460

Luminaire Tested: **24FCZ2-30-UNV-L83050-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: P313460
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-L83050-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: 1636.0 lumens
Efficiency: N/A
Efficacy: 69.9 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

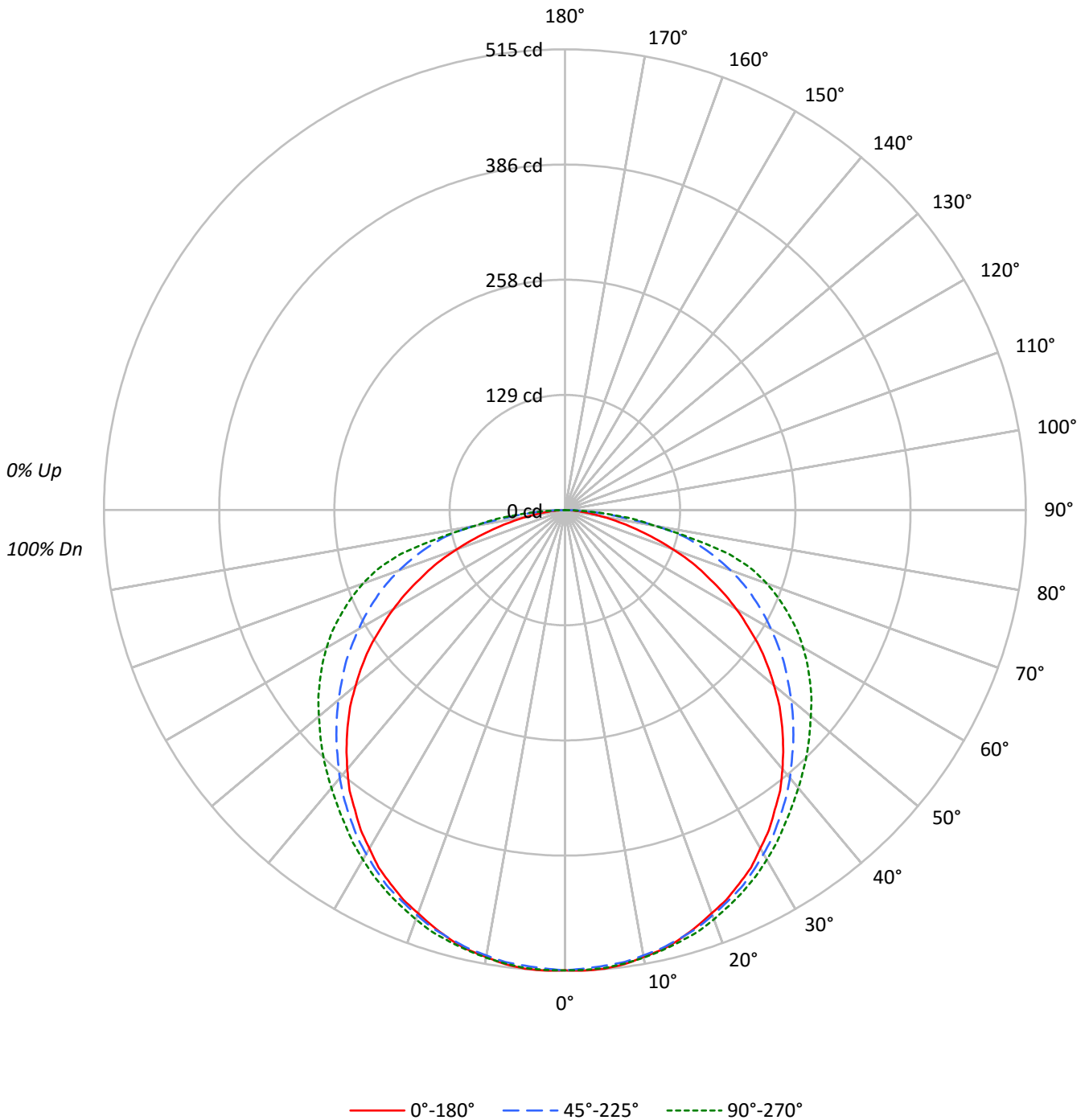
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313460

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-RDP-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P313460

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-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°	692	692	692
5°	695	690	694
10°	693	691	694
15°	692	691	695
20°	687	690	697
25°	684	692	699
30°	678	690	701
35°	672	688	704
40°	664	687	713
45°	653	687	729
50°	639	691	751
55°	623	702	784
60°	596	716	827
65°	558	741	878
70°	507	776	945
75°	430	818	987
80°	339	824	799
85°	250	627	701



TEST NUMBER: P313460

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-RDP-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	3.0
10°-20°	140.5	8.6
20°-30°	214.8	13.1
30°-40°	262.6	16.0
40°-50°	279.8	17.1
50°-60°	267.6	16.4
60°-70°	226.7	13.9
70°-80°	152.3	9.3
80°-90°	43.0	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°	404.0	24.7
0°-40°	666.6	40.7
0°-60°	1214.0	74.2
0°-90°	1636.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1636.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	514	514	514	514	514	
5°	514	514	511	514	514	49
15°	497	497	496	500	499	140
25°	461	462	466	470	471	212
35°	409	412	419	427	428	256
45°	343	349	361	376	383	265
55°	265	275	299	323	334	236
65°	175	193	233	264	276	174
75°	83	113	157	184	190	89
85°	16	33	41	44	45	20
90°	0	0	0	0	0	



TEST NUMBER: P313460

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-RDP-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	514.5	514.5	514.5	514.5	514.5
2.5°	515.3	515.3	512.9	514.5	514.5
5°	514.5	513.7	511.2	513.7	513.7
7.5°	512.0	511.2	509.6	512.0	511.2
10°	507.2	507.2	505.5	508.0	508.0
12.5°	503.1	502.3	501.5	504.7	503.9
15°	496.6	496.6	495.8	499.9	499.1
17.5°	488.5	489.3	490.1	493.4	494.2
20°	479.6	481.2	482.0	486.9	486.9
22.5°	471.5	472.3	473.9	478.8	478.8
25°	460.9	462.5	465.8	469.8	470.7
27.5°	450.4	451.2	455.2	460.9	461.7
30°	436.6	439.0	443.9	450.4	451.2
32.5°	424.4	426.8	432.5	439.0	440.6
35°	409.0	412.2	418.7	426.8	428.5
37.5°	395.2	397.6	405.7	414.7	417.1
40°	378.1	383.0	391.1	401.7	405.7
42.5°	361.1	366.0	375.7	389.5	394.4
45°	343.3	348.9	361.1	376.5	383.0
47.5°	325.4	331.9	345.7	363.5	370.8
50°	305.1	313.2	330.3	350.6	358.7
52.5°	285.6	295.4	314.0	336.8	347.3
55°	265.4	275.1	299.4	323.0	334.3
57.5°	242.6	255.6	282.4	309.2	321.3
60°	221.5	233.7	266.2	295.4	307.5
62.5°	198.8	215.0	249.9	280.8	292.9
65°	175.3	193.1	232.9	263.7	275.9
67.5°	154.2	173.7	215.9	246.7	258.9
70°	129.0	153.4	197.2	228.0	240.2
72.5°	105.5	132.3	177.7	207.7	219.1
75°	82.8	112.8	157.4	184.2	189.9
77.5°	61.7	93.3	136.3	147.7	143.6
80°	43.8	74.7	106.3	100.6	103.1
82.5°	28.4	56.8	65.7	74.7	77.1
85°	16.2	33.3	40.6	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)