

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: P309873

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA125-W2A-U-4500K**

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: P309873
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 1888.0 lumens
Efficiency: N/A
Efficacy: 79.3 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

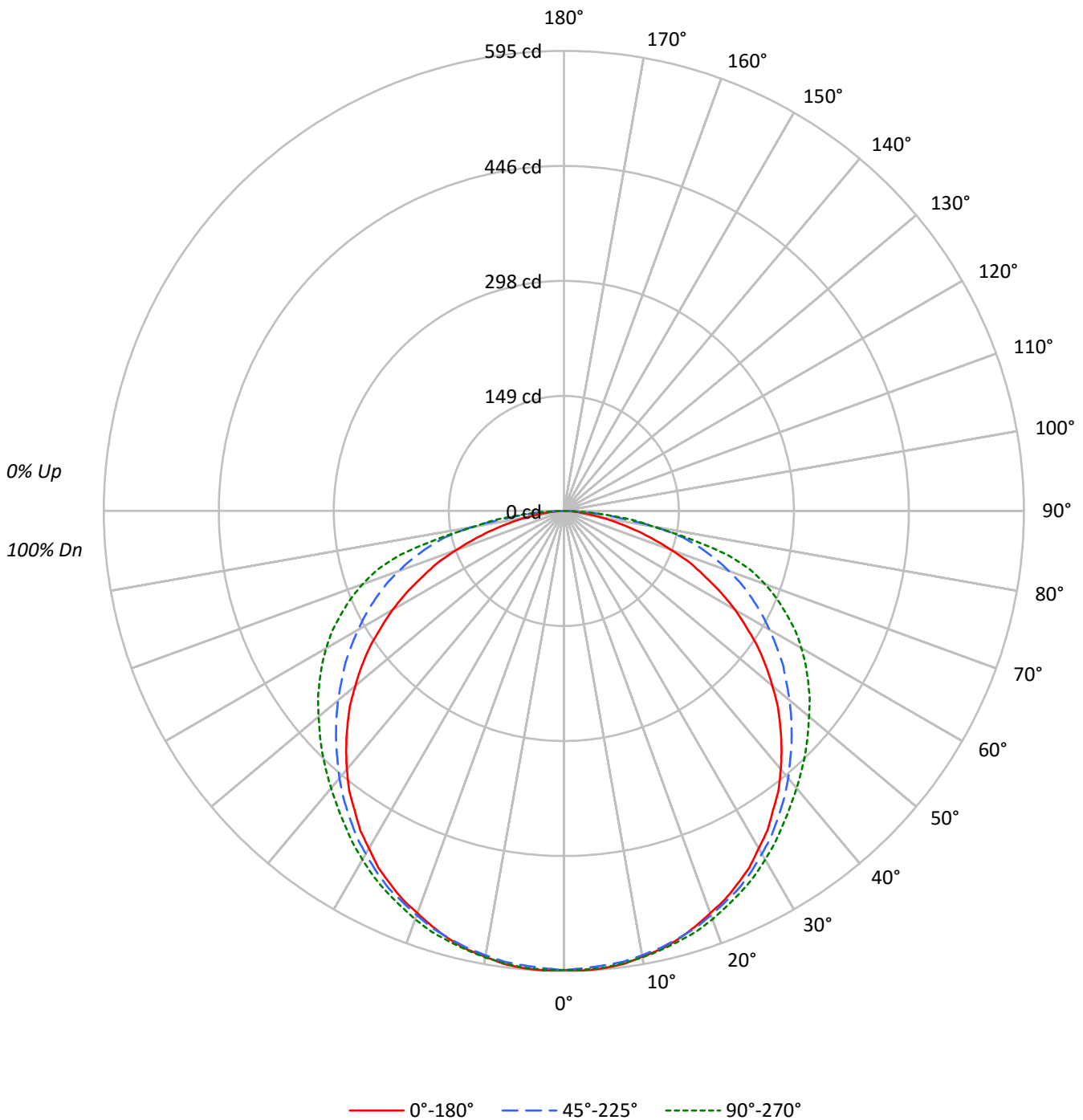
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	799	799	799
5°	802	797	801
10°	800	797	801
15°	798	797	802
20°	793	797	805
25°	790	798	806
30°	783	796	809
35°	775	794	812
40°	766	793	822
45°	754	793	841
50°	737	798	866
55°	718	811	905
60°	688	827	955
65°	644	856	1014
70°	586	895	1090
75°	496	945	1139
80°	392	951	921
85°	289	722	809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	3.0
10°-20°	162.1	8.6
20°-30°	247.9	13.1
30°-40°	303.0	16.0
40°-50°	322.9	17.1
50°-60°	308.8	16.4
60°-70°	261.6	13.9
70°-80°	175.8	9.3
80°-90°	49.6	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°	466.3	24.7
0°-40°	769.3	40.7
0°-60°	1401.0	74.2
0°-90°	1888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	594	593	590	593	593	56
15°	573	573	572	577	576	162
25°	532	534	538	542	543	245
35°	472	476	483	493	494	296
45°	396	403	417	434	442	306
55°	306	318	346	373	386	273
65°	202	223	269	304	318	201
75°	96	130	182	213	219	102
85°	19	38	47	51	52	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	593.7	593.7	593.7	593.7	593.7
2.5°	594.7	594.7	591.8	593.7	593.7
5°	593.7	592.8	590.0	592.8	592.8
7.5°	590.9	590.0	588.1	590.9	590.0
10°	585.3	585.3	583.4	586.2	586.2
12.5°	580.6	579.7	578.7	582.5	581.5
15°	573.1	573.1	572.2	576.9	575.9
17.5°	563.8	564.7	565.6	569.4	570.3
20°	553.5	555.3	556.3	561.9	561.9
22.5°	544.1	545.0	546.9	552.5	552.5
25°	531.9	533.8	537.5	542.2	543.2
27.5°	519.7	520.7	525.4	531.9	532.9
30°	503.8	506.6	512.2	519.7	520.7
32.5°	489.8	492.6	499.1	506.6	508.5
35°	472.0	475.7	483.2	492.6	494.5
37.5°	456.1	458.9	468.2	478.5	481.3
40°	436.4	442.0	451.4	463.6	468.2
42.5°	416.7	422.3	433.6	449.5	455.1
45°	396.1	402.7	416.7	434.5	442.0
47.5°	375.5	383.0	398.9	419.5	428.0
50°	352.1	361.5	381.1	404.6	413.9
52.5°	329.6	340.9	362.4	388.6	400.8
55°	306.2	317.5	345.6	372.7	385.8
57.5°	280.0	295.0	325.9	356.8	370.8
60°	255.7	269.7	307.2	340.9	354.9
62.5°	229.4	248.2	288.4	324.0	338.1
65°	202.3	222.9	268.8	304.4	318.4
67.5°	177.9	200.4	249.1	284.7	298.7
70°	148.9	177.0	227.6	263.1	277.2
72.5°	121.7	152.6	205.1	239.7	252.8
75°	95.5	130.2	181.7	212.6	219.1
77.5°	71.2	107.7	157.3	170.4	165.8
80°	50.6	86.2	122.7	116.1	118.9
82.5°	32.8	65.6	75.9	86.2	89.0
85°	18.7	38.4	46.8	50.6	52.4
87.5°	8.4	14.0	18.7	18.7	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)