

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: P312042

Luminaire Tested: **14FCZ2-29-UNV-L83050-RDP-CA08-W2A-U-4000K**

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: P312042
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-RDP-CA08-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 77.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

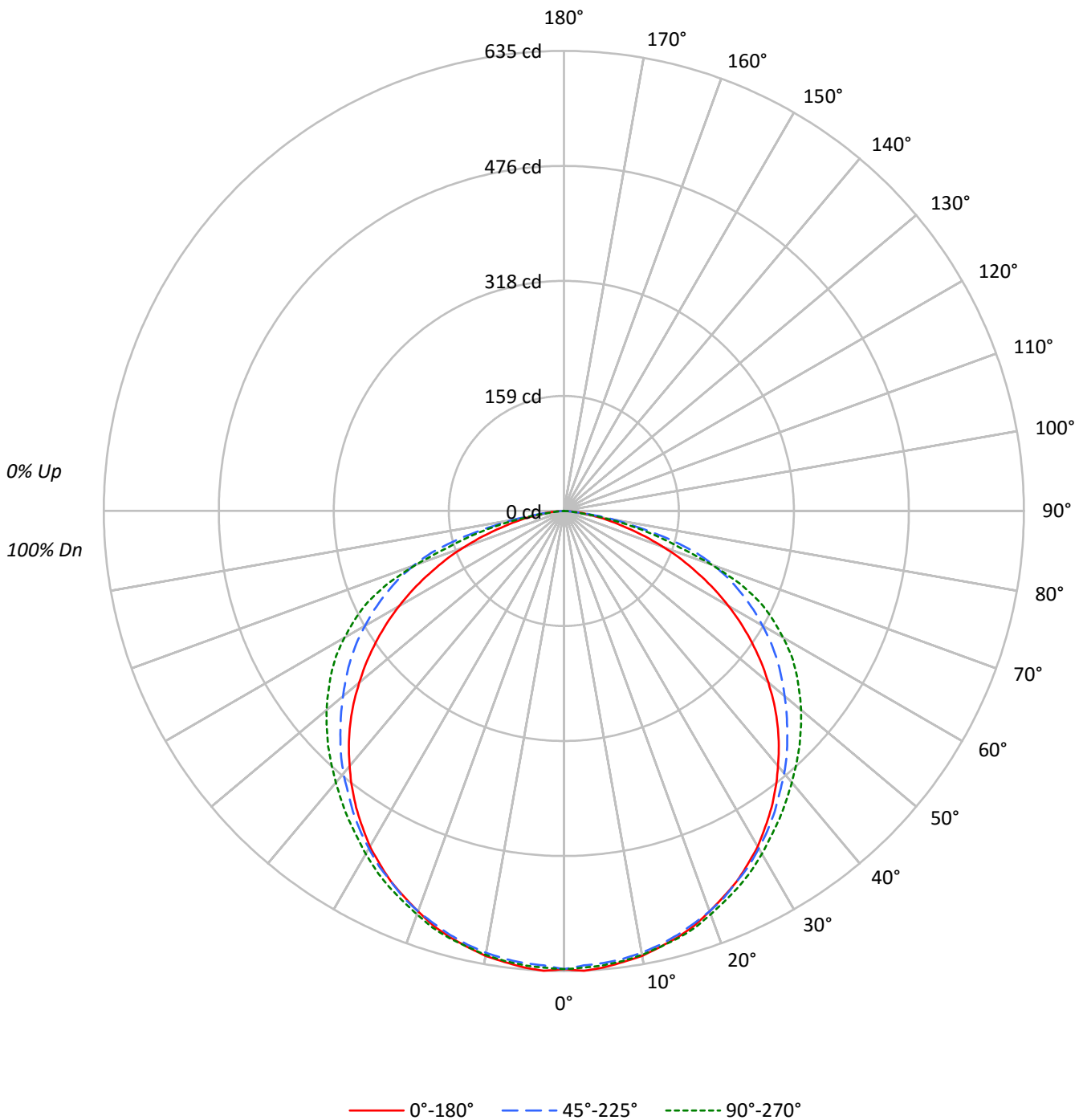
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1702	1702	1702
5°	1708	1692	1700
10°	1704	1692	1700
15°	1696	1688	1700
20°	1684	1684	1697
25°	1676	1676	1698
30°	1663	1672	1699
35°	1642	1666	1704
40°	1616	1662	1719
45°	1587	1660	1750
50°	1543	1666	1790
55°	1487	1688	1840
60°	1412	1706	1880
65°	1305	1727	1905
70°	1160	1740	1705
75°	935	1563	1364
80°	731	1097	891
85°	500	318	228



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	3.2
10°-20°	171.7	9.1
20°-30°	261.5	13.8
30°-40°	318.5	16.9
40°-50°	337.9	17.9
50°-60°	318.9	16.9
60°-70°	257.5	13.6
70°-80°	139.7	7.4
80°-90°	22.6	1.2
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°	493.0	26.1
0°-40°	811.5	43.0
0°-60°	1468.3	77.8
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°	632	632	632	632	632	
5°	632	631	626	631	629	60
15°	609	607	606	610	610	172
25°	564	563	564	570	572	260
35°	500	503	507	517	519	312
45°	417	423	436	452	460	321
55°	317	330	360	383	392	283
65°	205	230	271	293	299	203
75°	90	131	150	136	131	98
85°	16	18	10	9	7	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	632.3	632.3	632.3	632.3	632.3
2.5°	635.3	632.3	627.9	632.3	630.9
5°	632.3	630.9	626.4	630.9	629.4
7.5°	627.9	627.9	623.5	626.4	626.4
10°	623.5	622.0	619.1	623.5	622.0
12.5°	616.1	614.7	613.2	617.6	616.1
15°	608.8	607.3	605.8	610.2	610.2
17.5°	599.9	598.4	597.0	602.9	602.9
20°	588.1	588.1	588.1	594.0	592.5
22.5°	576.3	576.3	577.8	583.7	582.2
25°	564.5	563.1	564.5	570.4	571.9
27.5°	549.8	551.3	552.7	558.6	560.1
30°	535.1	536.5	538.0	545.4	546.8
32.5°	517.4	520.3	523.3	532.1	532.1
35°	499.7	502.6	507.1	517.4	518.8
37.5°	480.5	483.5	489.4	501.2	504.1
40°	459.9	464.3	473.1	484.9	489.4
42.5°	439.2	445.1	455.5	468.7	474.6
45°	417.1	423.0	436.3	452.5	459.9
47.5°	393.6	400.9	417.1	437.8	443.7
50°	368.5	378.8	398.0	420.1	427.5
52.5°	343.4	355.2	378.8	402.4	409.8
55°	316.9	330.2	359.7	383.2	392.1
57.5°	290.4	305.1	339.0	364.1	372.9
60°	262.4	280.1	316.9	342.0	349.3
62.5°	234.4	255.0	294.8	319.9	325.8
65°	204.9	229.9	271.2	293.3	299.2
67.5°	176.9	206.4	247.6	263.8	263.8
70°	147.4	179.8	221.1	225.5	216.7
72.5°	117.9	154.8	191.6	175.4	168.0
75°	89.9	131.2	150.3	135.6	131.2
77.5°	67.8	106.1	106.1	97.3	94.3
80°	47.2	81.1	70.8	61.9	57.5
82.5°	31.0	45.7	36.8	29.5	25.1
85°	16.2	17.7	10.3	8.8	7.4
87.5°	5.9	2.9	1.5	2.9	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)