

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: P312161

Luminaire Tested: **14FCZ2-20-UNV-L83050-CP250-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: P312161
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" POLYCARB 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: 1864.0 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

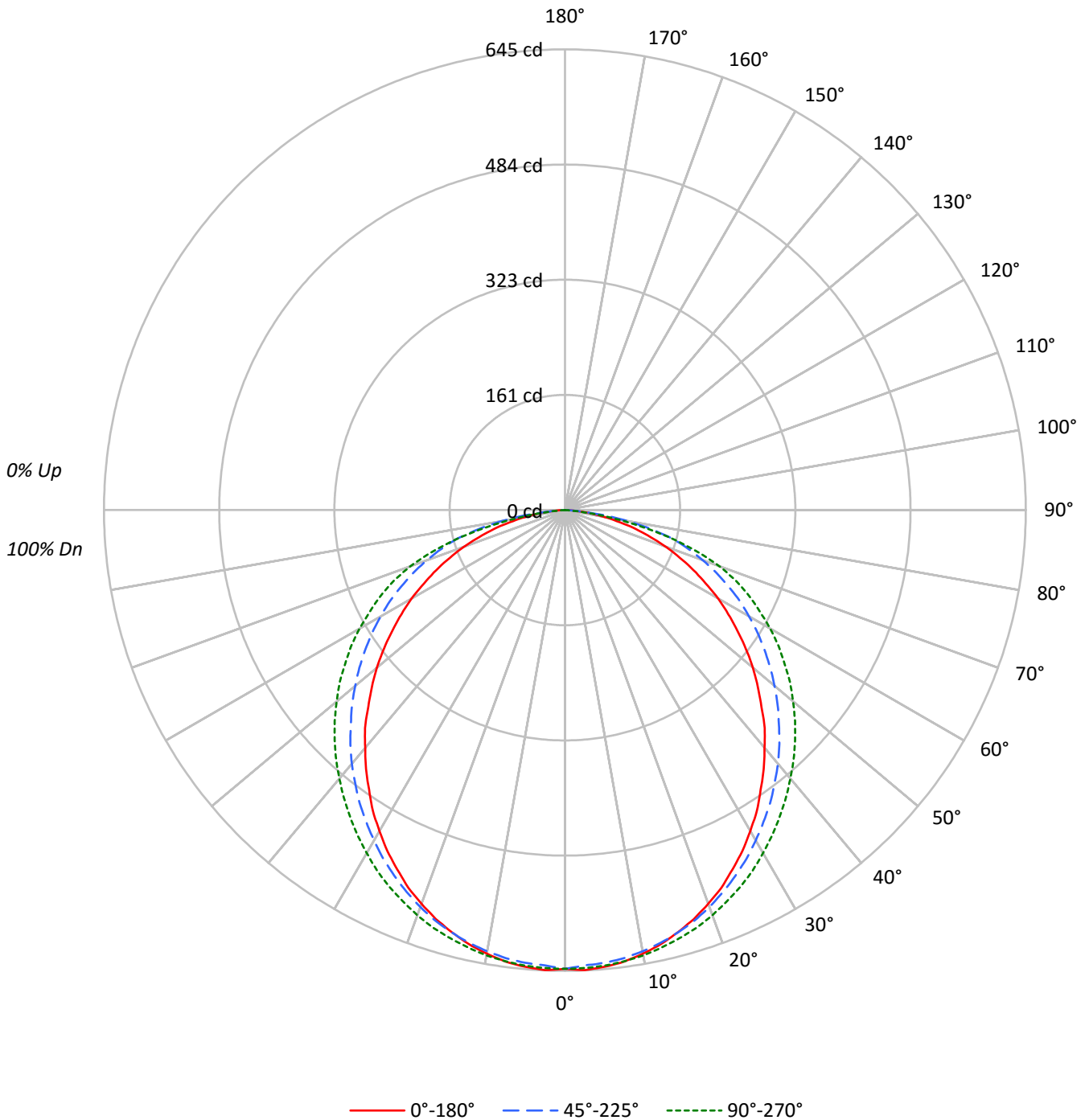
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	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	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1728	1728	1728
5°	1733	1719	1729
10°	1723	1714	1730
15°	1704	1706	1729
20°	1680	1694	1728
25°	1648	1677	1727
30°	1612	1660	1723
35°	1569	1645	1722
40°	1527	1629	1724
45°	1480	1612	1733
50°	1437	1604	1745
55°	1383	1599	1761
60°	1333	1602	1785
65°	1265	1606	1813
70°	1187	1618	1812
75°	1076	1633	1638
80°	882	1410	1165
85°	655	667	269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.8	3.3
10°-20°	173.6	9.3
20°-30°	261.5	14.0
30°-40°	313.8	16.8
40°-50°	327.0	17.5
50°-60°	302.8	16.2
60°-70°	244.6	13.1
70°-80°	149.2	8.0
80°-90°	30.8	1.7
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°	495.8	26.6
0°-40°	809.6	43.4
0°-60°	1439.4	77.2
0°-90°	1864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1864.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	642	640	636	641	640	61
15°	612	612	612	620	620	172
25°	555	558	565	579	582	256
35°	478	485	501	519	524	299
45°	389	401	424	447	456	301
55°	295	310	341	367	375	264
65°	199	218	252	278	285	196
75°	104	126	157	160	158	109
85°	21	32	22	12	9	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	642.2	642.2	642.2	642.2	642.2
2.5°	644.6	642.6	638.0	642.6	641.7
5°	641.7	640.1	636.3	640.9	640.1
7.5°	637.6	635.9	632.6	638.0	637.2
10°	630.5	629.7	627.2	633.4	633.0
12.5°	622.2	621.8	620.5	627.6	627.2
15°	611.8	612.2	612.2	620.5	620.5
17.5°	600.2	601.0	602.7	611.8	613.1
20°	586.5	588.1	591.4	601.8	603.5
22.5°	572.3	573.6	578.6	591.0	592.7
25°	554.9	558.2	564.8	579.0	581.5
27.5°	538.2	541.2	550.3	564.8	569.0
30°	518.7	523.3	534.1	549.9	554.5
32.5°	500.0	505.0	517.5	535.8	539.9
35°	477.6	485.0	500.8	519.1	524.1
37.5°	457.2	464.3	482.1	502.1	507.9
40°	434.8	443.5	463.8	485.0	490.9
42.5°	414.0	422.3	444.3	465.9	473.8
45°	389.0	400.7	423.5	447.2	455.5
47.5°	366.2	377.8	404.0	429.3	436.8
50°	343.3	355.8	383.2	409.4	416.9
52.5°	319.6	332.9	362.4	388.6	397.3
55°	294.7	310.1	340.8	367.4	375.3
57.5°	271.0	286.8	319.6	346.6	354.5
60°	247.7	263.9	297.6	323.4	331.7
62.5°	221.9	241.1	276.0	301.3	307.6
65°	198.7	218.2	252.3	277.6	284.7
67.5°	174.2	195.3	229.4	252.7	259.4
70°	150.9	172.9	205.7	227.4	230.3
72.5°	125.9	148.4	181.6	195.3	195.3
75°	103.5	126.4	157.1	159.6	157.5
77.5°	79.0	104.3	124.3	119.3	114.3
80°	56.9	81.9	91.0	81.9	75.2
82.5°	38.2	59.4	54.9	43.6	38.7
85°	21.2	31.6	21.6	12.1	8.7
87.5°	7.9	7.1	2.1	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)