

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: P311847

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CA125-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: P311847
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
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-HRP-CA125-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 1594.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

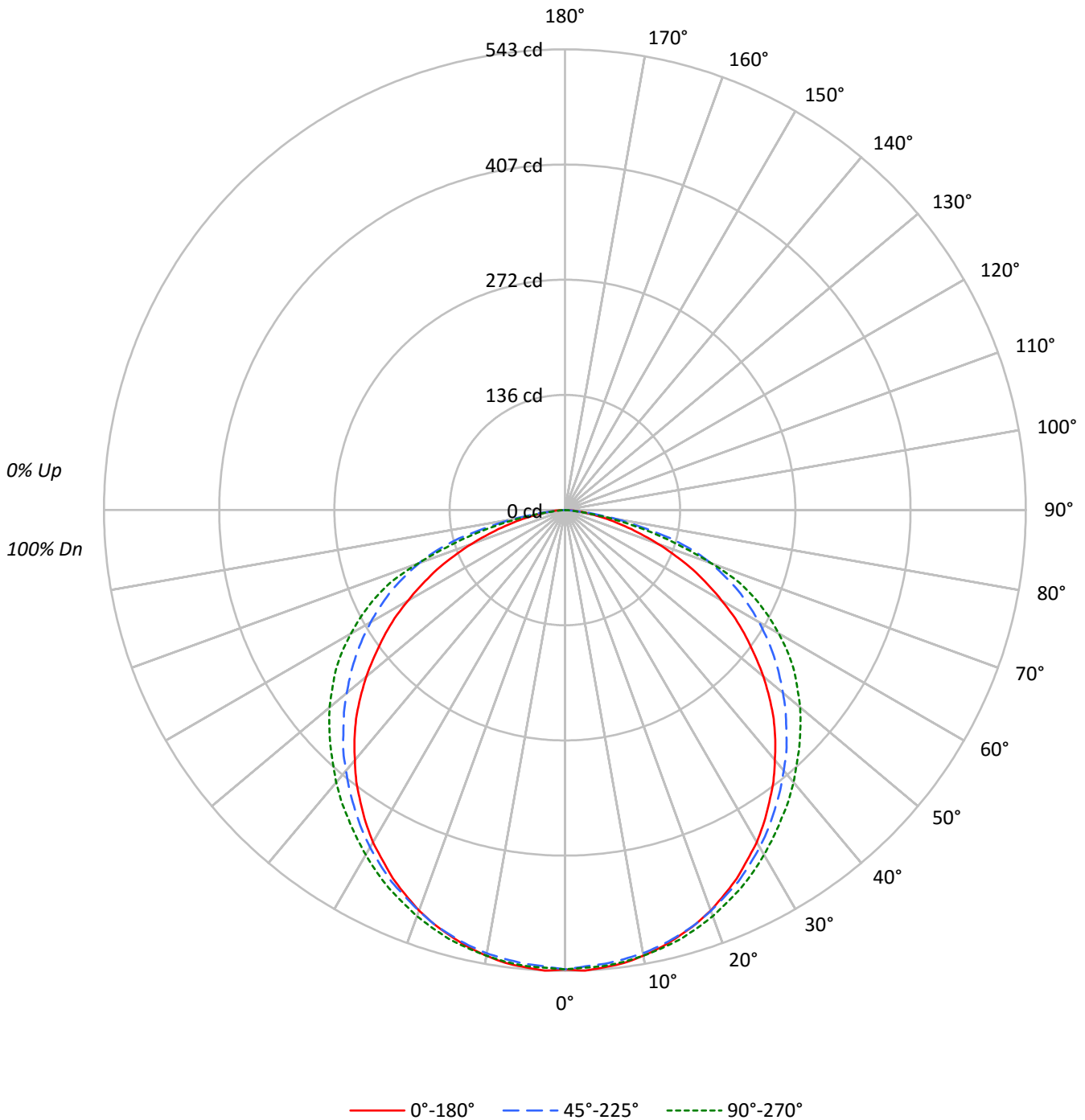
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	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	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1457	1457	1457
5°	1461	1450	1457
10°	1457	1449	1457
15°	1448	1445	1459
20°	1438	1440	1458
25°	1423	1435	1458
30°	1405	1427	1458
35°	1380	1416	1461
40°	1352	1409	1472
45°	1324	1404	1488
50°	1278	1404	1515
55°	1223	1411	1547
60°	1149	1421	1567
65°	1060	1436	1577
70°	923	1439	1452
75°	761	1339	1173
80°	598	964	784
85°	463	371	185



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.2	3.2
10°-20°	147.1	9.2
20°-30°	223.3	14.0
30°-40°	270.6	17.0
40°-50°	285.1	17.9
50°-60°	266.2	16.7
60°-70°	212.7	13.3
70°-80°	117.1	7.3
80°-90°	20.7	1.3
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°	421.6	26.5
0°-40°	692.2	43.4
0°-60°	1243.5	78.0
0°-90°	1594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	541	541	541	541	541	
5°	541	539	537	540	539	51
15°	520	520	519	524	524	147
25°	479	480	483	490	491	221
35°	420	424	431	442	445	263
45°	348	354	369	385	391	268
55°	261	274	301	322	330	233
65°	166	188	226	244	248	164
75°	73	105	129	116	113	79
85°	15	19	12	8	6	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	541.3	541.3	541.3	541.3	541.3
2.5°	543.3	541.8	538.3	541.3	539.8
5°	540.8	539.3	536.8	540.3	539.3
7.5°	538.3	536.3	533.8	537.8	536.8
10°	533.3	531.8	530.3	533.8	533.3
12.5°	527.3	526.8	525.3	529.3	528.8
15°	519.8	519.8	518.8	523.8	523.8
17.5°	511.8	511.3	511.8	517.3	516.8
20°	502.2	502.2	502.7	509.3	509.3
22.5°	490.7	491.2	492.7	500.7	500.2
25°	479.2	480.2	483.2	490.2	491.2
27.5°	465.1	467.6	471.2	479.7	480.7
30°	452.1	453.6	459.1	467.1	469.2
32.5°	436.6	439.6	445.6	454.6	457.1
35°	420.0	424.0	431.1	442.1	444.6
37.5°	403.5	407.0	416.5	428.1	432.6
40°	384.9	391.0	401.0	414.0	419.0
42.5°	366.9	372.9	386.4	400.0	404.5
45°	347.9	354.4	368.9	385.4	391.0
47.5°	326.8	334.3	352.9	370.4	376.4
50°	305.3	314.8	335.3	354.9	361.9
52.5°	282.7	294.7	318.3	338.8	345.3
55°	260.6	273.7	300.7	321.8	329.8
57.5°	238.1	252.1	282.7	306.8	311.3
60°	213.5	230.6	264.1	285.2	291.2
62.5°	189.5	209.0	245.1	265.2	270.2
65°	166.4	187.5	225.6	244.1	247.6
67.5°	141.3	166.4	204.0	221.0	222.0
70°	117.3	146.4	182.9	191.0	184.5
72.5°	93.7	124.8	158.4	151.9	146.4
75°	73.2	104.8	128.8	115.8	112.8
77.5°	54.1	85.7	92.2	85.2	79.7
80°	38.6	67.7	62.2	53.1	50.6
82.5°	26.6	42.6	34.1	26.6	23.1
85°	15.0	19.0	12.0	7.5	6.0
87.5°	6.5	4.5	2.5	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)