

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: P311846

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CA125-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: P311846
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-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 1518.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

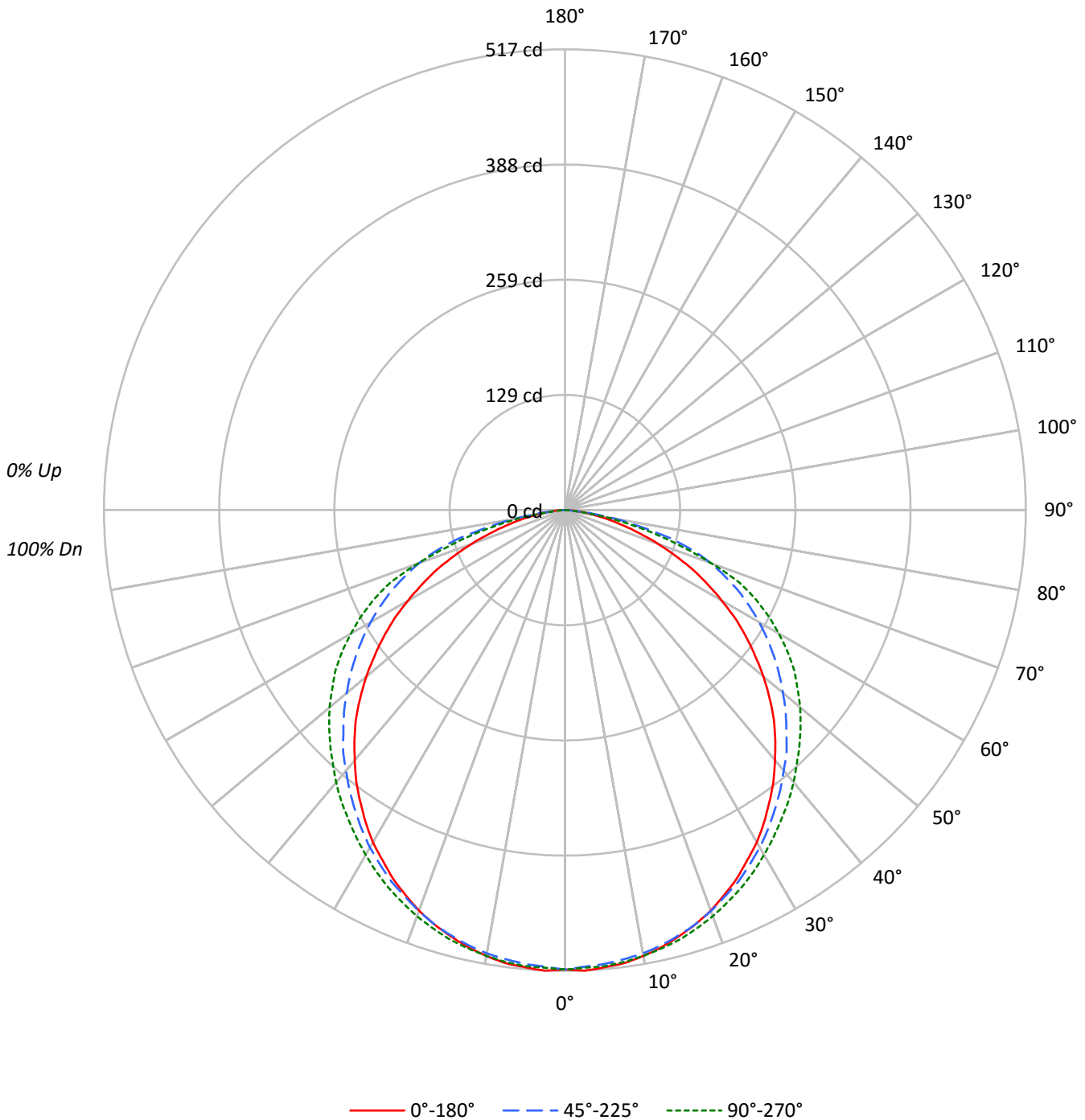
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1387	1387	1387
5°	1391	1381	1387
10°	1388	1380	1388
15°	1379	1376	1390
20°	1370	1371	1389
25°	1355	1366	1389
30°	1338	1359	1388
35°	1314	1349	1391
40°	1288	1342	1402
45°	1261	1337	1417
50°	1217	1337	1443
55°	1164	1344	1474
60°	1094	1354	1492
65°	1009	1368	1501
70°	879	1371	1382
75°	725	1276	1117
80°	570	917	747
85°	442	355	176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	3.2
10°-20°	140.0	9.2
20°-30°	212.7	14.0
30°-40°	257.7	17.0
40°-50°	271.5	17.9
50°-60°	253.5	16.7
60°-70°	202.6	13.3
70°-80°	111.5	7.3
80°-90°	19.7	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°	401.5	26.5
0°-40°	659.2	43.4
0°-60°	1184.3	78.0
0°-90°	1518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	516	516	516	516	516	
5°	515	514	511	515	514	49
15°	495	495	494	499	499	140
25°	456	457	460	467	468	210
35°	400	404	410	421	423	250
45°	331	338	351	367	372	255
55°	248	261	286	306	314	222
65°	158	178	215	232	236	156
75°	70	100	123	110	107	75
85°	14	18	12	7	6	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	515.5	515.5	515.5	515.5	515.5
2.5°	517.4	516.0	512.7	515.5	514.1
5°	515.0	513.6	511.2	514.6	513.6
7.5°	512.7	510.7	508.4	512.2	511.2
10°	507.9	506.5	505.0	508.4	507.9
12.5°	502.2	501.7	500.2	504.1	503.6
15°	495.0	495.0	494.0	498.8	498.8
17.5°	487.4	486.9	487.4	492.6	492.1
20°	478.3	478.3	478.8	485.0	485.0
22.5°	467.3	467.8	469.2	476.9	476.4
25°	456.3	457.3	460.1	466.8	467.8
27.5°	443.0	445.4	448.7	456.8	457.8
30°	430.6	432.0	437.2	444.9	446.8
32.5°	415.8	418.6	424.3	432.9	435.3
35°	400.0	403.8	410.5	421.0	423.4
37.5°	384.3	387.6	396.7	407.6	411.9
40°	366.6	372.3	381.9	394.3	399.1
42.5°	349.4	355.1	368.0	380.9	385.2
45°	331.3	337.5	351.3	367.1	372.3
47.5°	311.2	318.4	336.0	352.7	358.5
50°	290.7	299.8	319.3	338.0	344.6
52.5°	269.2	280.7	303.1	322.7	328.9
55°	248.2	260.6	286.4	306.4	314.1
57.5°	226.7	240.1	269.2	292.1	296.4
60°	203.3	219.6	251.6	271.6	277.3
62.5°	180.4	199.0	233.4	252.5	257.3
65°	158.5	178.5	214.8	232.5	235.8
67.5°	134.6	158.5	194.3	210.5	211.5
70°	111.7	139.4	174.2	181.9	175.7
72.5°	89.3	118.9	150.8	144.6	139.4
75°	69.7	99.8	122.7	110.3	107.4
77.5°	51.6	81.6	87.8	81.1	75.9
80°	36.8	64.4	59.2	50.6	48.2
82.5°	25.3	40.6	32.5	25.3	22.0
85°	14.3	18.1	11.5	7.2	5.7
87.5°	6.2	4.3	2.4	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)