

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: P311840

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CA08-W2A-U-3000K**

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: P311840
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-CA08-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 1440.0 lumens
Efficiency: N/A
Efficacy: 87.3 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

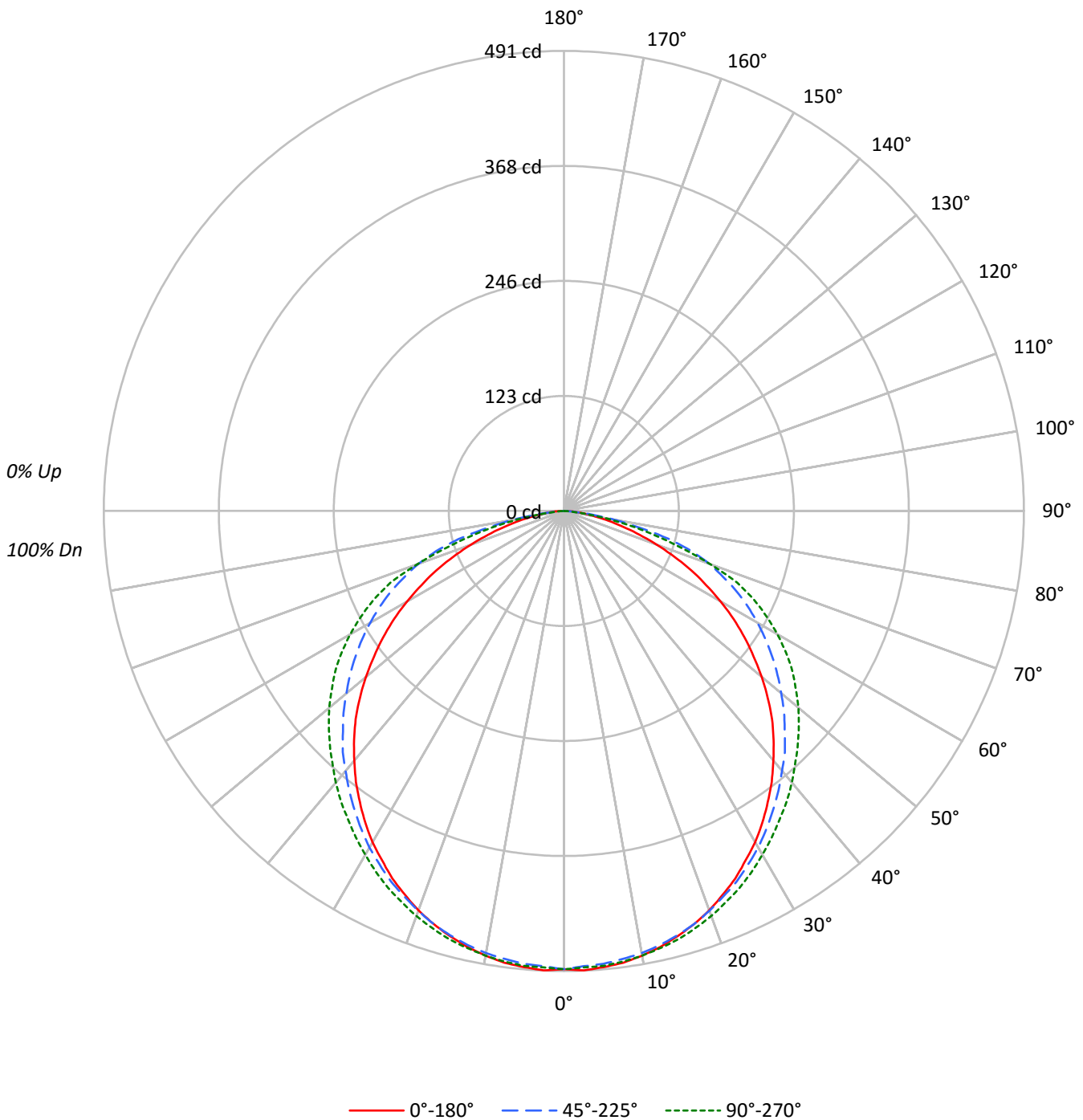
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1316	1316	1316
5°	1320	1310	1316
10°	1317	1309	1317
15°	1308	1306	1318
20°	1299	1301	1318
25°	1285	1296	1318
30°	1269	1289	1317
35°	1247	1279	1319
40°	1222	1272	1330
45°	1196	1268	1344
50°	1155	1268	1369
55°	1105	1275	1398
60°	1038	1284	1416
65°	957	1298	1424
70°	834	1301	1311
75°	687	1210	1059
80°	541	869	708
85°	420	337	167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.3	3.2
10°-20°	132.9	9.2
20°-30°	201.7	14.0
30°-40°	244.4	17.0
40°-50°	257.6	17.9
50°-60°	240.5	16.7
60°-70°	192.2	13.3
70°-80°	105.7	7.3
80°-90°	18.7	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°	380.9	26.5
0°-40°	625.3	43.4
0°-60°	1123.4	78.0
0°-90°	1440.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1440.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	489	489	489	489	489	
5°	489	487	485	488	487	46
15°	470	470	469	473	473	133
25°	433	434	436	443	444	199
35°	380	383	389	399	402	237
45°	314	320	333	348	353	242
55°	236	247	272	291	298	210
65°	150	169	204	220	224	148
75°	66	95	116	105	102	71
85°	14	17	11	7	5	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	489.0	489.0	489.0	489.0	489.0
2.5°	490.8	489.5	486.3	489.0	487.7
5°	488.6	487.2	485.0	488.1	487.2
7.5°	486.3	484.5	482.2	485.9	485.0
10°	481.8	480.4	479.1	482.2	481.8
12.5°	476.4	475.9	474.5	478.2	477.7
15°	469.6	469.6	468.7	473.2	473.2
17.5°	462.3	461.9	462.3	467.3	466.8
20°	453.7	453.7	454.2	460.1	460.1
22.5°	443.3	443.8	445.1	452.4	451.9
25°	432.9	433.8	436.5	442.8	443.8
27.5°	420.2	422.5	425.6	433.3	434.2
30°	408.4	409.8	414.8	422.0	423.8
32.5°	394.4	397.1	402.5	410.7	413.0
35°	379.5	383.1	389.4	399.4	401.6
37.5°	364.5	367.7	376.3	386.7	390.8
40°	347.8	353.2	362.2	374.0	378.5
42.5°	331.5	336.9	349.1	361.3	365.4
45°	314.2	320.1	333.3	348.2	353.2
47.5°	295.2	302.0	318.8	334.6	340.1
50°	275.8	284.4	302.9	320.6	326.9
52.5°	255.4	266.3	287.5	306.1	312.0
55°	235.5	247.2	271.7	290.7	297.9
57.5°	215.1	227.8	255.4	277.1	281.2
60°	192.9	208.3	238.6	257.6	263.1
62.5°	171.2	188.8	221.4	239.5	244.1
65°	150.3	169.3	203.8	220.5	223.7
67.5°	127.7	150.3	184.3	199.7	200.6
70°	106.0	132.2	165.3	172.5	166.6
72.5°	84.7	112.7	143.1	137.2	132.2
75°	66.1	94.6	116.4	104.6	101.9
77.5°	48.9	77.4	83.3	77.0	72.0
80°	34.9	61.1	56.1	48.0	45.7
82.5°	24.0	38.5	30.8	24.0	20.8
85°	13.6	17.2	10.9	6.8	5.4
87.5°	5.9	4.1	2.3	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)