

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: P311998

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-CA125-W2A-U-4500K**

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: P311998
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: 14FCZ2-20-UNV-L83050-RDP-CA125-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 1362.0 lumens
Efficiency: N/A
Efficacy: 78.7 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

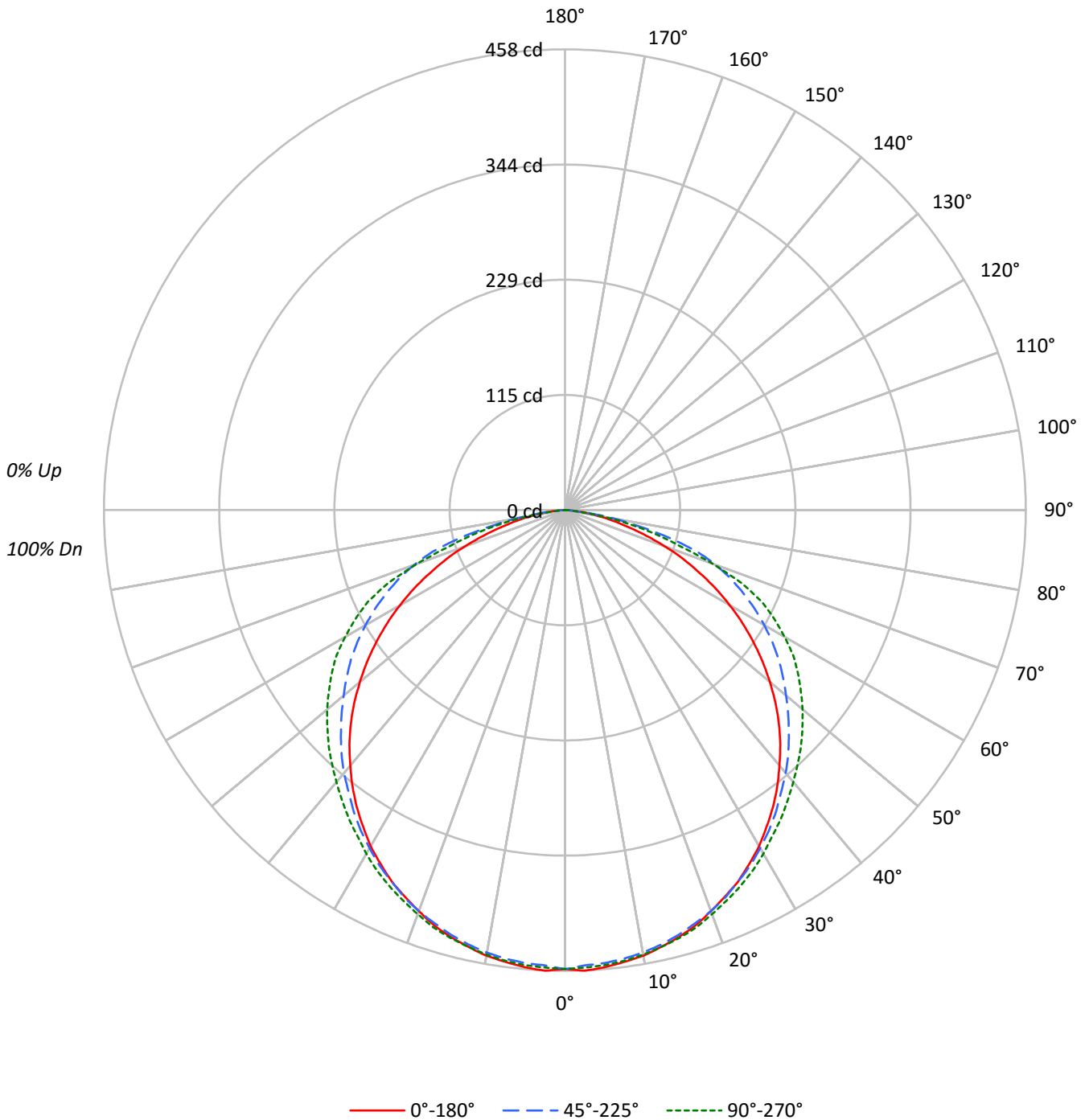
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1228	1228	1228
5°	1232	1221	1226
10°	1229	1220	1226
15°	1224	1217	1226
20°	1215	1215	1224
25°	1209	1209	1225
30°	1199	1206	1226
35°	1184	1202	1230
40°	1166	1199	1240
45°	1145	1198	1263
50°	1113	1202	1291
55°	1072	1217	1327
60°	1019	1230	1356
65°	941	1246	1375
70°	836	1255	1230
75°	675	1128	984
80°	527	790	643
85°	361	228	164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.2	3.2
10°-20°	123.9	9.1
20°-30°	188.6	13.8
30°-40°	229.7	16.9
40°-50°	243.7	17.9
50°-60°	230.0	16.9
60°-70°	185.7	13.6
70°-80°	100.8	7.4
80°-90°	16.3	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°	355.7	26.1
0°-40°	585.4	43.0
0°-60°	1059.2	77.8
0°-90°	1362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1362.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	456	455	452	455	454	43
15°	439	438	437	440	440	124
25°	407	406	407	412	413	188
35°	360	363	366	373	374	225
45°	301	305	315	326	332	232
55°	229	238	260	276	283	204
65°	148	166	196	212	216	146
75°	65	95	108	98	95	71
85°	12	13	7	6	5	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	456.2	456.2	456.2	456.2	456.2
2.5°	458.3	456.2	453.0	456.2	455.1
5°	456.2	455.1	451.9	455.1	454.0
7.5°	453.0	453.0	449.8	451.9	451.9
10°	449.8	448.7	446.6	449.8	448.7
12.5°	444.5	443.4	442.3	445.5	444.5
15°	439.2	438.1	437.0	440.2	440.2
17.5°	432.8	431.7	430.6	434.9	434.9
20°	424.3	424.3	424.3	428.5	427.5
22.5°	415.8	415.8	416.8	421.1	420.0
25°	407.3	406.2	407.3	411.5	412.6
27.5°	396.6	397.7	398.7	403.0	404.1
30°	386.0	387.1	388.1	393.4	394.5
32.5°	373.2	375.4	377.5	383.9	383.9
35°	360.5	362.6	365.8	373.2	374.3
37.5°	346.6	348.8	353.0	361.5	363.7
40°	331.8	334.9	341.3	349.8	353.0
42.5°	316.9	321.1	328.6	338.1	342.4
45°	300.9	305.2	314.7	326.4	331.8
47.5°	283.9	289.2	300.9	315.8	320.1
50°	265.8	273.3	287.1	303.0	308.4
52.5°	247.8	256.3	273.3	290.3	295.6
55°	228.6	238.2	259.5	276.5	282.8
57.5°	209.5	220.1	244.6	262.6	269.0
60°	189.3	202.0	228.6	246.7	252.0
62.5°	169.1	184.0	212.7	230.7	235.0
65°	147.8	165.9	195.7	211.6	215.9
67.5°	127.6	148.9	178.6	190.3	190.3
70°	106.3	129.7	159.5	162.7	156.3
72.5°	85.1	111.6	138.2	126.5	121.2
75°	64.9	94.6	108.5	97.8	94.6
77.5°	48.9	76.6	76.6	70.2	68.1
80°	34.0	58.5	51.0	44.7	41.5
82.5°	22.3	33.0	26.6	21.3	18.1
85°	11.7	12.8	7.4	6.4	5.3
87.5°	4.3	2.1	1.1	2.1	1.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)