

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: P311852

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CP125-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: P311852
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-CP125-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB 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: 1563.0 lumens
Efficiency: N/A
Efficacy: 92.5 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

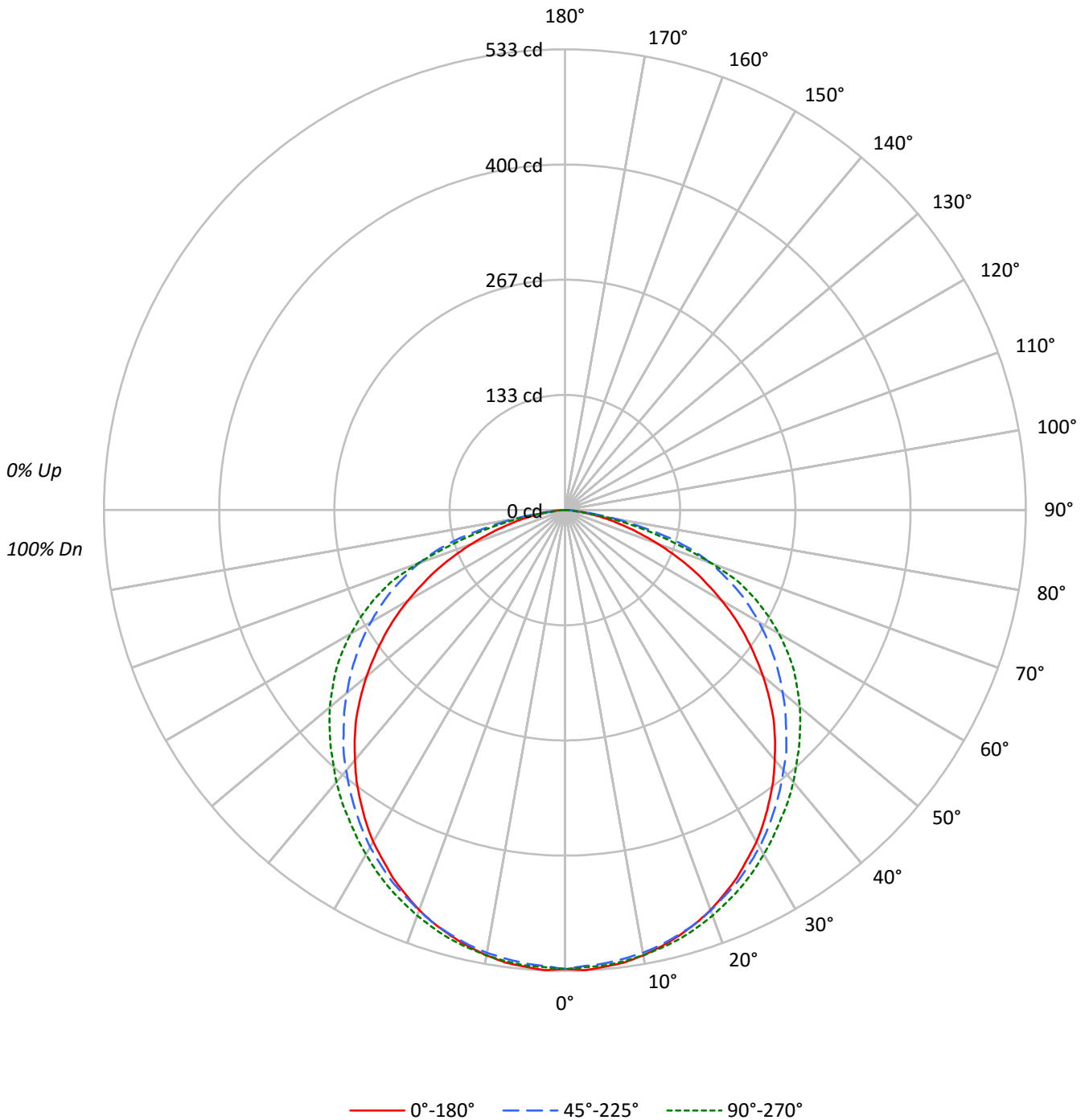
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84				84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69				69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58				58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49				49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42				42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37				37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33				33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29				29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26				26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24				24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1428	1428	1428
5°	1432	1422	1428
10°	1429	1421	1429
15°	1420	1417	1431
20°	1410	1412	1430
25°	1395	1407	1430
30°	1377	1399	1429
35°	1353	1389	1432
40°	1326	1381	1443
45°	1298	1376	1459
50°	1253	1376	1486
55°	1199	1384	1517
60°	1127	1394	1537
65°	1039	1408	1546
70°	905	1412	1423
75°	747	1313	1150
80°	586	944	769
85°	454	364	182



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.3	3.2
10°-20°	144.2	9.2
20°-30°	219.0	14.0
30°-40°	265.3	17.0
40°-50°	279.6	17.9
50°-60°	261.0	16.7
60°-70°	208.6	13.3
70°-80°	114.8	7.3
80°-90°	20.3	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°	413.4	26.5
0°-40°	678.8	43.4
0°-60°	1219.4	78.0
0°-90°	1563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1563.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	530	529	526	530	529	50
15°	510	510	509	514	514	144
25°	470	471	474	481	482	216
35°	412	416	423	434	436	258
45°	341	348	362	378	383	262
55°	256	268	295	316	323	228
65°	163	184	221	239	243	161
75°	72	103	126	114	111	77
85°	15	19	12	7	6	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	530.8	530.8	530.8	530.8	530.8
2.5°	532.8	531.3	527.9	530.8	529.3
5°	530.3	528.8	526.4	529.8	528.8
7.5°	527.9	525.9	523.4	527.4	526.4
10°	522.9	521.5	520.0	523.4	522.9
12.5°	517.0	516.5	515.1	519.0	518.5
15°	509.7	509.7	508.7	513.6	513.6
17.5°	501.8	501.3	501.8	507.2	506.7
20°	492.5	492.5	493.0	499.3	499.3
22.5°	481.2	481.7	483.1	491.0	490.5
25°	469.9	470.8	473.8	480.7	481.7
27.5°	456.1	458.6	462.0	470.4	471.3
30°	443.3	444.8	450.2	458.1	460.0
32.5°	428.1	431.0	436.9	445.8	448.2
35°	411.9	415.8	422.7	433.5	435.9
37.5°	395.6	399.1	408.4	419.7	424.2
40°	377.5	383.4	393.2	406.0	410.9
42.5°	359.8	365.7	378.9	392.2	396.6
45°	341.1	347.5	361.7	378.0	383.4
47.5°	320.4	327.8	346.0	363.2	369.1
50°	299.3	308.7	328.8	348.0	354.9
52.5°	277.2	289.0	312.1	332.2	338.6
55°	255.6	268.4	294.9	315.5	323.4
57.5°	233.5	247.2	277.2	300.8	305.2
60°	209.4	226.1	259.0	279.7	285.6
62.5°	185.8	204.9	240.3	260.0	264.9
65°	163.2	183.8	221.2	239.4	242.8
67.5°	138.6	163.2	200.0	216.7	217.7
70°	115.0	143.5	179.4	187.3	180.9
72.5°	91.9	122.4	155.3	148.9	143.5
75°	71.8	102.7	126.3	113.5	110.6
77.5°	53.1	84.0	90.4	83.6	78.1
80°	37.8	66.4	60.9	52.1	49.6
82.5°	26.0	41.8	33.4	26.0	22.6
85°	14.7	18.7	11.8	7.4	5.9
87.5°	6.4	4.4	2.5	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)