

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: P311861

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CP250-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: P311861
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-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 1414.0 lumens
Efficiency: N/A
Efficacy: 85.7 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

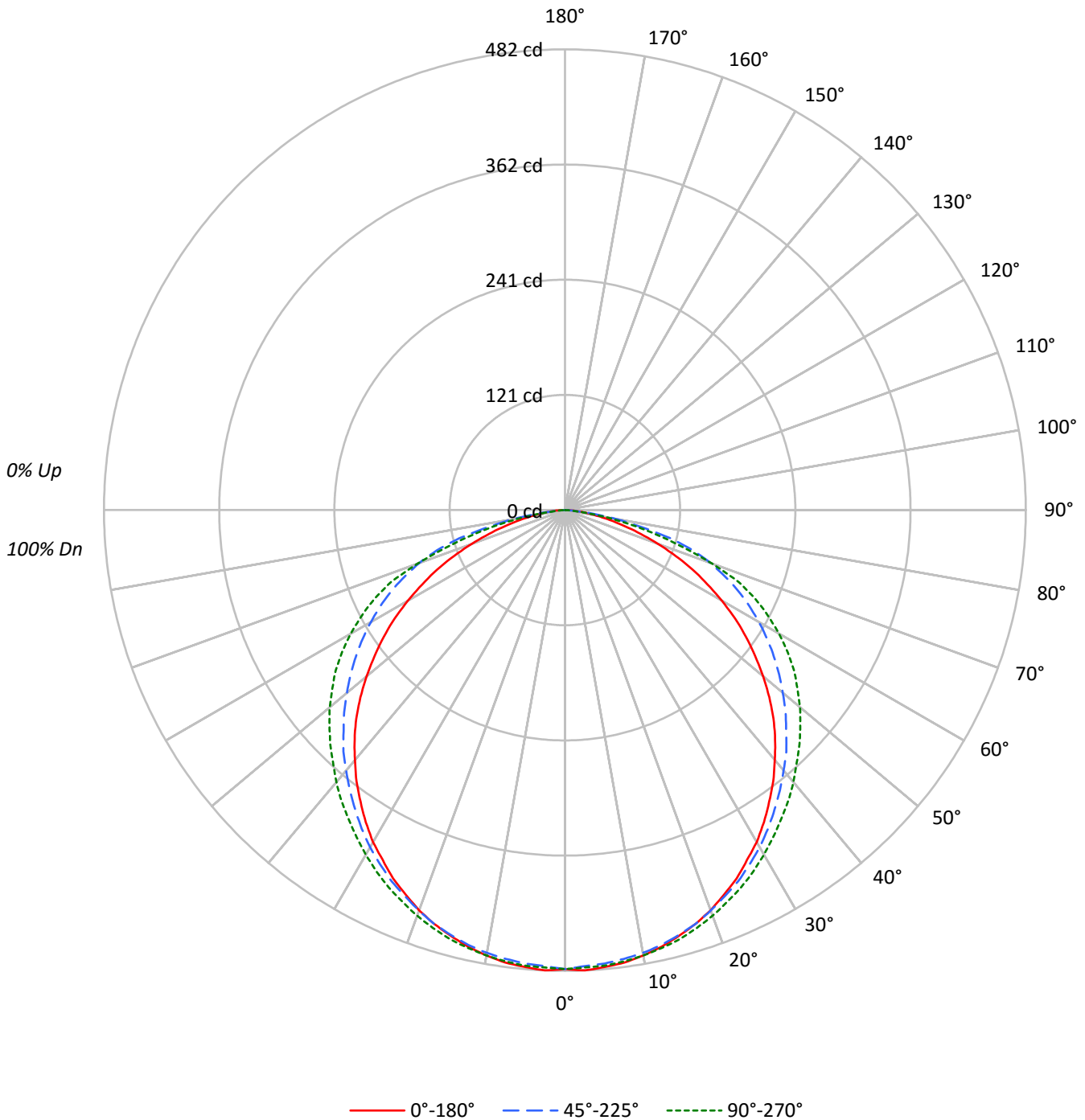
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1292	1292	1292
5°	1296	1286	1292
10°	1293	1285	1293
15°	1285	1282	1294
20°	1276	1277	1294
25°	1262	1273	1294
30°	1246	1266	1293
35°	1224	1256	1296
40°	1200	1250	1306
45°	1174	1245	1320
50°	1134	1245	1344
55°	1085	1252	1373
60°	1019	1261	1390
65°	940	1274	1398
70°	818	1277	1287
75°	675	1188	1040
80°	530	854	696
85°	411	330	164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	3.2
10°-20°	130.5	9.2
20°-30°	198.1	14.0
30°-40°	240.0	17.0
40°-50°	252.9	17.9
50°-60°	236.1	16.7
60°-70°	188.7	13.3
70°-80°	103.8	7.3
80°-90°	18.3	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°	374.0	26.5
0°-40°	614.1	43.4
0°-60°	1103.1	78.0
0°-90°	1414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	480	478	476	479	478	46
15°	461	461	460	465	465	130
25°	425	426	429	435	436	196
35°	373	376	382	392	394	233
45°	309	314	327	342	347	237
55°	231	243	267	286	293	206
65°	148	166	200	216	220	145
75°	65	93	114	103	100	70
85°	13	17	11	7	5	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	480.2	480.2	480.2	480.2	480.2
2.5°	482.0	480.6	477.5	480.2	478.9
5°	479.8	478.4	476.2	479.3	478.4
7.5°	477.5	475.8	473.5	477.1	476.2
10°	473.1	471.8	470.4	473.5	473.1
12.5°	467.8	467.3	466.0	469.5	469.1
15°	461.1	461.1	460.2	464.6	464.6
17.5°	454.0	453.5	454.0	458.9	458.4
20°	445.5	445.5	446.0	451.7	451.7
22.5°	435.3	435.7	437.1	444.2	443.7
25°	425.1	426.0	428.6	434.8	435.7
27.5°	412.6	414.8	418.0	425.5	426.4
30°	401.1	402.4	407.3	414.4	416.2
32.5°	387.3	389.9	395.3	403.3	405.5
35°	372.6	376.2	382.4	392.2	394.4
37.5°	357.9	361.0	369.5	379.7	383.7
40°	341.5	346.8	355.7	367.3	371.7
42.5°	325.5	330.8	342.8	354.8	358.8
45°	308.6	314.4	327.2	341.9	346.8
47.5°	289.9	296.6	313.0	328.6	333.9
50°	270.8	279.2	297.5	314.8	321.0
52.5°	250.8	261.4	282.3	300.6	306.4
55°	231.2	242.8	266.8	285.5	292.6
57.5°	211.2	223.6	250.8	272.1	276.1
60°	189.4	204.5	234.3	253.0	258.3
62.5°	168.1	185.4	217.4	235.2	239.7
65°	147.6	166.3	200.1	216.5	219.6
67.5°	125.4	147.6	181.0	196.1	197.0
70°	104.0	129.8	162.3	169.4	163.6
72.5°	83.1	110.7	140.5	134.7	129.8
75°	64.9	92.9	114.3	102.7	100.0
77.5°	48.0	76.0	81.8	75.6	70.7
80°	34.2	60.0	55.1	47.1	44.9
82.5°	23.6	37.8	30.2	23.6	20.5
85°	13.3	16.9	10.7	6.7	5.3
87.5°	5.8	4.0	2.2	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)