

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: P311888

Luminaire Tested: **14FCZ2-25-UNV-L83050-HRP-CP250-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: P311888
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: 14FCZ2-25-UNV-L83050-HRP-CP250-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 1748.9 lumens
Efficiency: N/A
Efficacy: 84.9 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

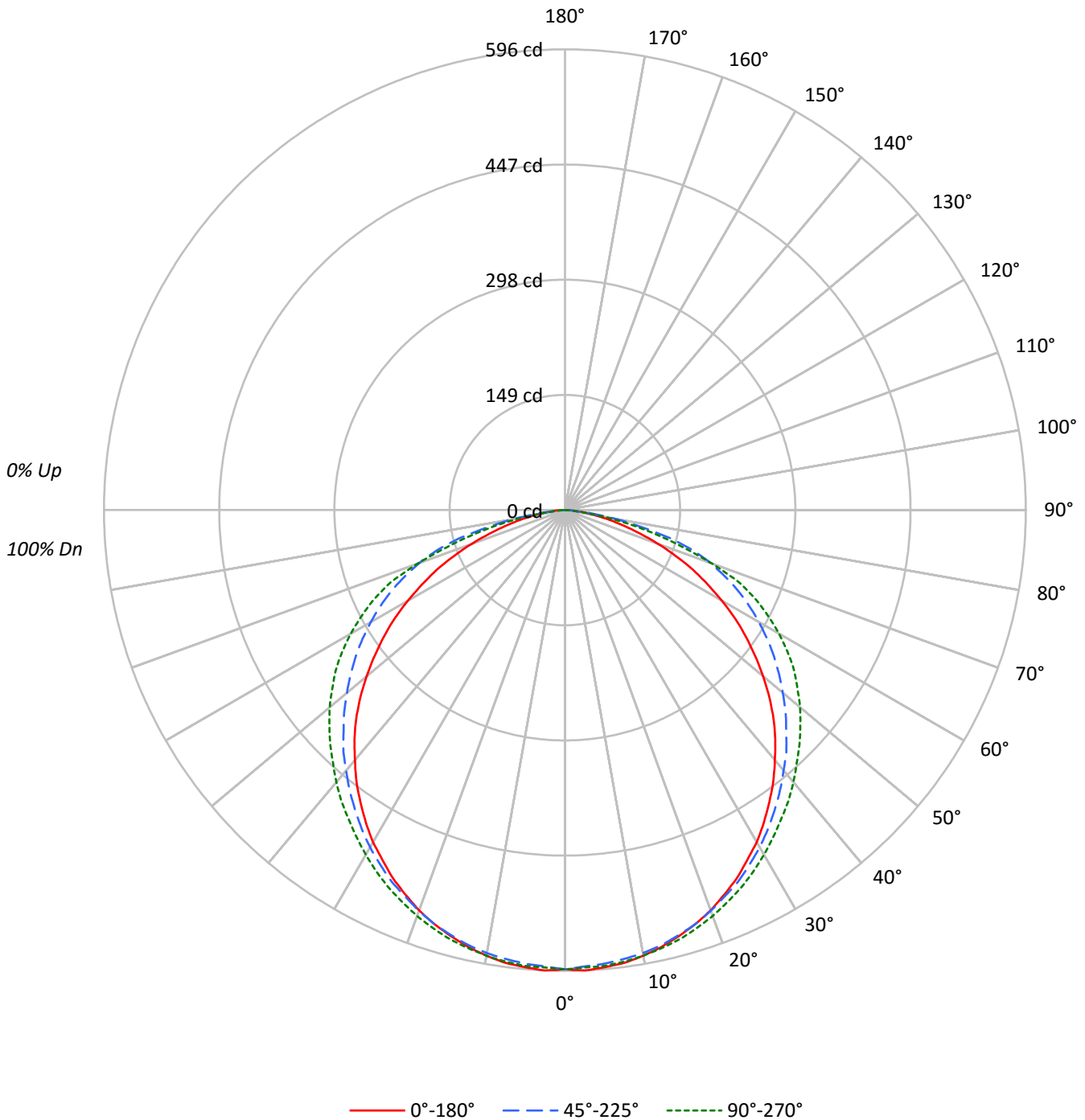
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1598	1598	1598
5°	1603	1591	1599
10°	1599	1590	1599
15°	1589	1586	1601
20°	1578	1580	1600
25°	1561	1574	1600
30°	1542	1565	1600
35°	1514	1554	1602
40°	1484	1546	1615
45°	1453	1541	1633
50°	1402	1540	1662
55°	1342	1548	1698
60°	1261	1560	1720
65°	1163	1576	1730
70°	1013	1579	1592
75°	835	1469	1286
80°	656	1057	860
85°	509	408	204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	3.2
10°-20°	161.4	9.2
20°-30°	245.0	14.0
30°-40°	296.9	17.0
40°-50°	312.9	17.9
50°-60°	292.1	16.7
60°-70°	233.4	13.3
70°-80°	128.4	7.3
80°-90°	22.7	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°	462.6	26.5
0°-40°	759.5	43.4
0°-60°	1364.5	78.0
0°-90°	1748.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1748.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	593	592	589	593	592	56
15°	570	570	569	575	575	161
25°	526	527	530	538	539	242
35°	461	465	473	485	488	288
45°	382	389	405	423	429	294
55°	286	300	330	353	362	255
65°	183	206	248	268	272	180
75°	80	115	141	127	124	86
85°	16	21	13	8	7	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	594.0	594.0	594.0	594.0	594.0
2.5°	596.2	594.5	590.7	594.0	592.3
5°	593.4	591.8	589.0	592.9	591.8
7.5°	590.7	588.5	585.7	590.1	589.0
10°	585.2	583.5	581.9	585.7	585.2
12.5°	578.6	578.0	576.4	580.8	580.2
15°	570.3	570.3	569.2	574.7	574.7
17.5°	561.5	561.0	561.5	567.6	567.0
20°	551.1	551.1	551.6	558.8	558.8
22.5°	538.4	539.0	540.6	549.4	548.9
25°	525.8	526.9	530.2	537.9	539.0
27.5°	510.4	513.1	517.0	526.3	527.4
30°	496.1	497.7	503.8	512.6	514.8
32.5°	479.0	482.3	488.9	498.8	501.6
35°	460.9	465.3	473.0	485.1	487.8
37.5°	442.7	446.6	457.0	469.7	474.6
40°	422.4	429.0	440.0	454.3	459.8
42.5°	402.6	409.2	424.0	438.9	443.8
45°	381.7	388.8	404.8	422.9	429.0
47.5°	358.6	366.8	387.2	406.4	413.0
50°	334.9	345.4	367.9	389.4	397.1
52.5°	310.2	323.4	349.2	371.8	378.9
55°	286.0	300.3	330.0	353.1	361.9
57.5°	261.2	276.6	310.2	336.6	341.5
60°	234.3	253.0	289.8	312.9	319.5
62.5°	207.9	229.3	268.9	290.9	296.4
65°	182.6	205.7	247.5	267.8	271.7
67.5°	155.1	182.6	223.8	242.5	243.6
70°	128.7	160.6	200.7	209.5	202.4
72.5°	102.8	136.9	173.8	166.6	160.6
75°	80.3	114.9	141.3	127.0	123.7
77.5°	59.4	94.0	101.2	93.5	87.4
80°	42.3	74.2	68.2	58.3	55.5
82.5°	29.1	46.7	37.4	29.1	25.3
85°	16.5	20.9	13.2	8.2	6.6
87.5°	7.1	4.9	2.7	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)