

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: P311910

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CP250-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: P311910
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: 14FCZ2-29-UNV-L83050-HRP-CP250-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 1864.0 lumens
Efficiency: N/A
Efficacy: 78.3 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

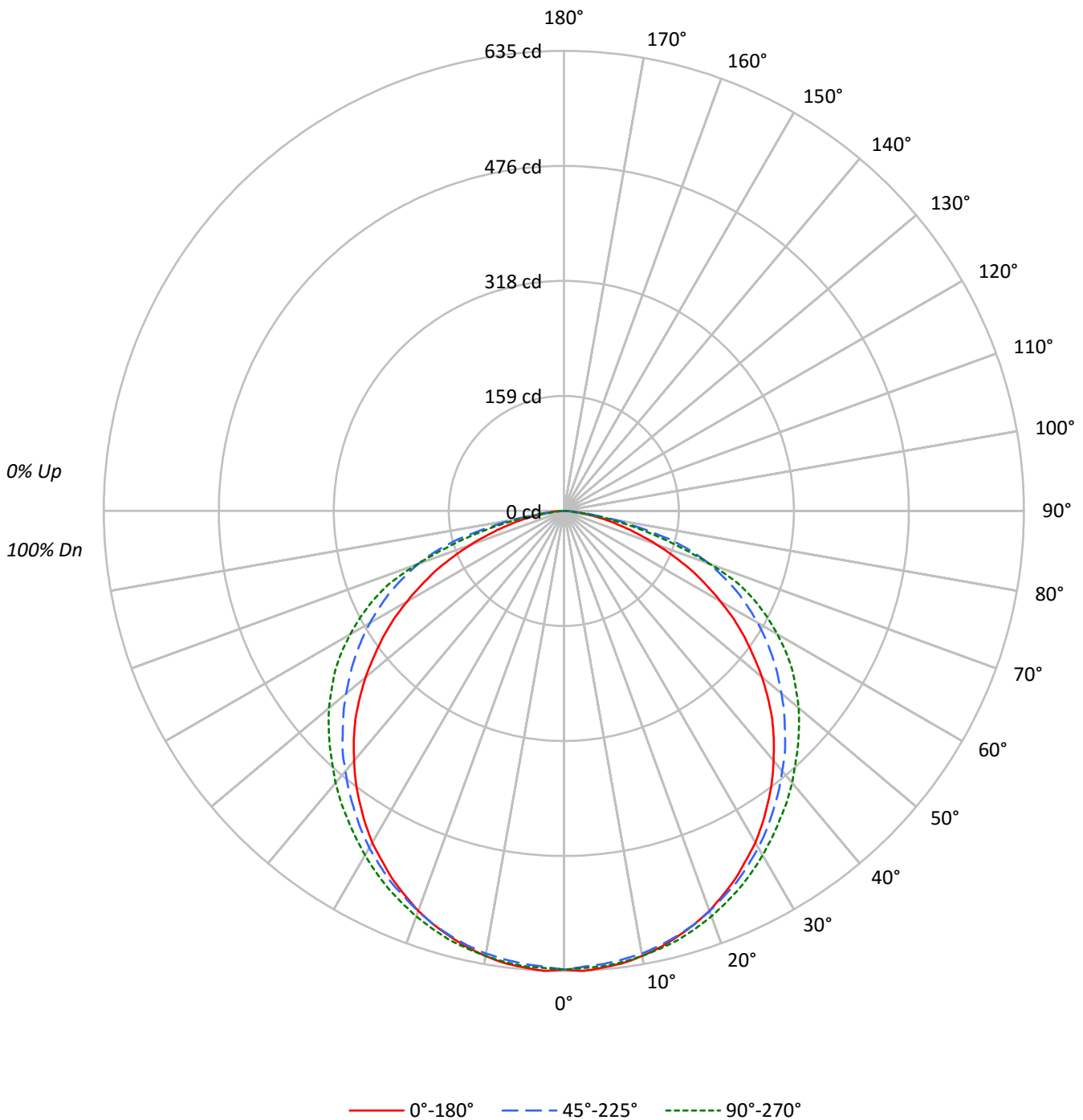
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1703	1703	1703
5°	1708	1696	1704
10°	1704	1694	1704
15°	1693	1690	1706
20°	1682	1684	1705
25°	1664	1678	1705
30°	1643	1668	1705
35°	1614	1656	1708
40°	1581	1647	1721
45°	1548	1642	1740
50°	1495	1641	1772
55°	1430	1650	1810
60°	1344	1662	1833
65°	1239	1680	1843
70°	1079	1683	1697
75°	890	1566	1371
80°	699	1127	917
85°	543	435	216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	3.2
10°-20°	172.0	9.2
20°-30°	261.1	14.0
30°-40°	316.4	17.0
40°-50°	333.4	17.9
50°-60°	311.3	16.7
60°-70°	248.8	13.3
70°-80°	136.9	7.3
80°-90°	24.2	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°	493.0	26.5
0°-40°	809.5	43.4
0°-60°	1454.2	78.0
0°-90°	1864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1864.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	632	631	628	632	631	60
15°	608	608	607	612	612	172
25°	560	562	565	573	574	258
35°	491	496	504	517	520	307
45°	407	414	431	451	457	313
55°	305	320	352	376	386	272
65°	195	219	264	285	290	192
75°	86	122	151	135	132	92
85°	18	22	14	9	7	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	633.0	633.0	633.0	633.0	633.0
2.5°	635.4	633.6	629.5	633.0	631.3
5°	632.4	630.7	627.7	631.9	630.7
7.5°	629.5	627.2	624.2	628.9	627.7
10°	623.6	621.9	620.1	624.2	623.6
12.5°	616.6	616.0	614.3	619.0	618.4
15°	607.8	607.8	606.6	612.5	612.5
17.5°	598.4	597.9	598.4	604.9	604.3
20°	587.3	587.3	587.9	595.5	595.5
22.5°	573.8	574.4	576.2	585.5	585.0
25°	560.3	561.5	565.0	573.2	574.4
27.5°	543.9	546.9	551.0	560.9	562.1
30°	528.7	530.5	536.9	546.3	548.6
32.5°	510.5	514.0	521.1	531.6	534.6
35°	491.2	495.9	504.1	517.0	519.9
37.5°	471.8	475.9	487.1	500.6	505.8
40°	450.2	457.2	468.9	484.1	490.0
42.5°	429.0	436.1	451.9	467.7	473.0
45°	406.8	414.4	431.4	450.7	457.2
47.5°	382.2	391.0	412.6	433.2	440.2
50°	357.0	368.1	392.1	415.0	423.2
52.5°	330.6	344.6	372.2	396.2	403.8
55°	304.8	320.0	351.7	376.3	385.7
57.5°	278.4	294.8	330.6	358.7	364.0
60°	249.7	269.6	308.9	333.5	340.5
62.5°	221.6	244.4	286.6	310.1	315.9
65°	194.6	219.2	263.8	285.4	289.5
67.5°	165.3	194.6	238.6	258.5	259.7
70°	137.2	171.2	213.9	223.3	215.7
72.5°	109.6	145.9	185.2	177.6	171.2
75°	85.6	122.5	150.6	135.4	131.9
77.5°	63.3	100.2	107.8	99.6	93.2
80°	45.1	79.1	72.7	62.1	59.2
82.5°	31.1	49.8	39.9	31.1	27.0
85°	17.6	22.3	14.1	8.8	7.0
87.5°	7.6	5.3	2.9	2.3	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)