

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: P312207

Luminaire Tested: **14FCZ2-29-UNV-L83050-CP187-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: P312207
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
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-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" 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: 2753.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

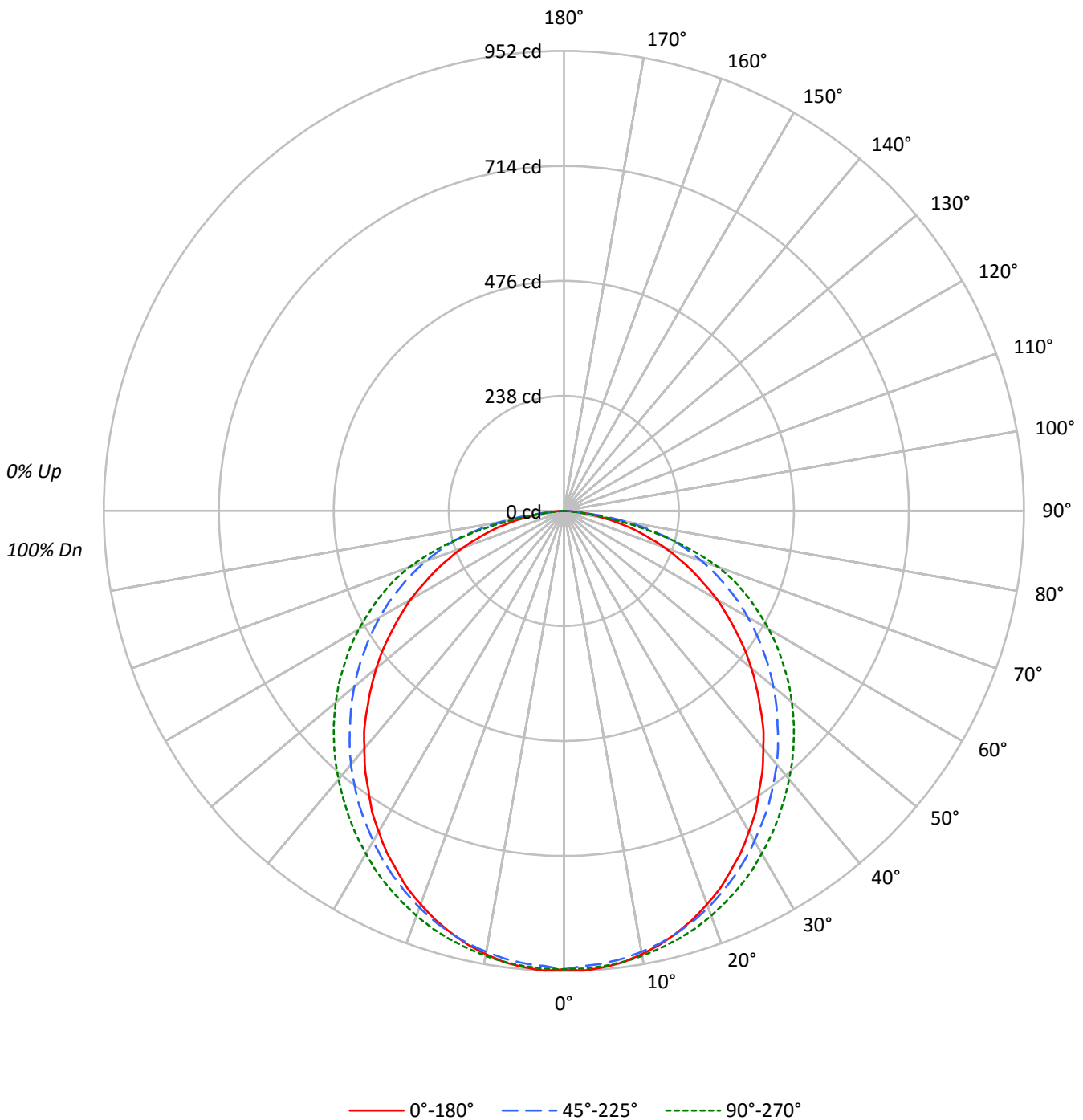
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	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	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	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	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2552	2552	2552
5°	2560	2539	2553
10°	2544	2531	2555
15°	2517	2519	2553
20°	2481	2501	2552
25°	2433	2477	2550
30°	2380	2451	2545
35°	2317	2430	2543
40°	2256	2407	2547
45°	2187	2380	2560
50°	2123	2370	2578
55°	2042	2362	2601
60°	1969	2365	2637
65°	1868	2372	2677
70°	1753	2391	2676
75°	1590	2412	2419
80°	1303	2083	1722
85°	966	985	398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	3.3
10°-20°	256.4	9.3
20°-30°	386.2	14.0
30°-40°	463.4	16.8
40°-50°	483.0	17.5
50°-60°	447.2	16.2
60°-70°	361.3	13.1
70°-80°	220.3	8.0
80°-90°	45.5	1.7
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°	732.3	26.6
0°-40°	1195.7	43.4
0°-60°	2125.9	77.2
0°-90°	2753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2753.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	948	948	948	948	948	
5°	948	945	940	947	945	90
15°	904	904	904	916	916	255
25°	820	824	834	855	859	378
35°	705	716	740	767	774	442
45°	575	592	626	660	673	444
55°	435	458	503	543	554	390
65°	293	322	373	410	420	290
75°	153	187	232	236	233	161
85°	31	47	32	18	13	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	948.4	948.4	948.4	948.4	948.4
2.5°	952.1	949.0	942.3	949.0	947.8
5°	947.8	945.3	939.8	946.6	945.3
7.5°	941.7	939.2	934.3	942.3	941.1
10°	931.2	930.0	926.3	935.5	934.9
12.5°	919.0	918.3	916.5	926.9	926.3
15°	903.6	904.2	904.2	916.5	916.5
17.5°	886.4	887.6	890.1	903.6	905.4
20°	866.2	868.6	873.5	888.9	891.3
22.5°	845.3	847.1	854.5	872.9	875.4
25°	819.5	824.4	834.2	855.1	858.8
27.5°	795.0	799.2	812.8	834.2	840.4
30°	766.1	772.9	788.8	812.1	818.9
32.5°	738.5	745.8	764.3	791.3	797.4
35°	705.3	716.4	739.7	766.7	774.1
37.5°	675.2	685.7	712.1	741.5	750.1
40°	642.1	655.0	685.1	716.4	725.0
42.5°	611.4	623.7	656.2	688.1	699.8
45°	574.6	591.8	625.5	660.5	672.8
47.5°	540.8	558.0	596.7	634.1	645.2
50°	507.1	525.5	566.0	604.7	615.7
52.5°	472.1	491.7	535.3	574.0	586.9
55°	435.2	457.9	503.4	542.7	554.3
57.5°	400.2	423.6	472.1	512.0	523.6
60°	365.9	389.8	439.5	477.6	489.9
62.5°	327.8	356.0	407.6	445.1	454.3
65°	293.4	322.3	372.6	410.1	420.5
67.5°	257.2	288.5	338.9	373.2	383.1
70°	222.8	255.4	303.9	335.8	340.1
72.5°	186.0	219.1	268.3	288.5	288.5
75°	152.9	186.6	232.0	235.7	232.7
77.5°	116.6	154.1	183.5	176.2	168.8
80°	84.1	120.9	134.4	120.9	111.1
82.5°	56.5	87.8	81.0	64.5	57.1
85°	31.3	46.7	31.9	17.8	12.9
87.5°	11.7	10.4	3.1	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)