

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: P312213

Luminaire Tested: **14FCZ2-29-UNV-L83050-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: P312213
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-CP250-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,RIBBED 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: 2756.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

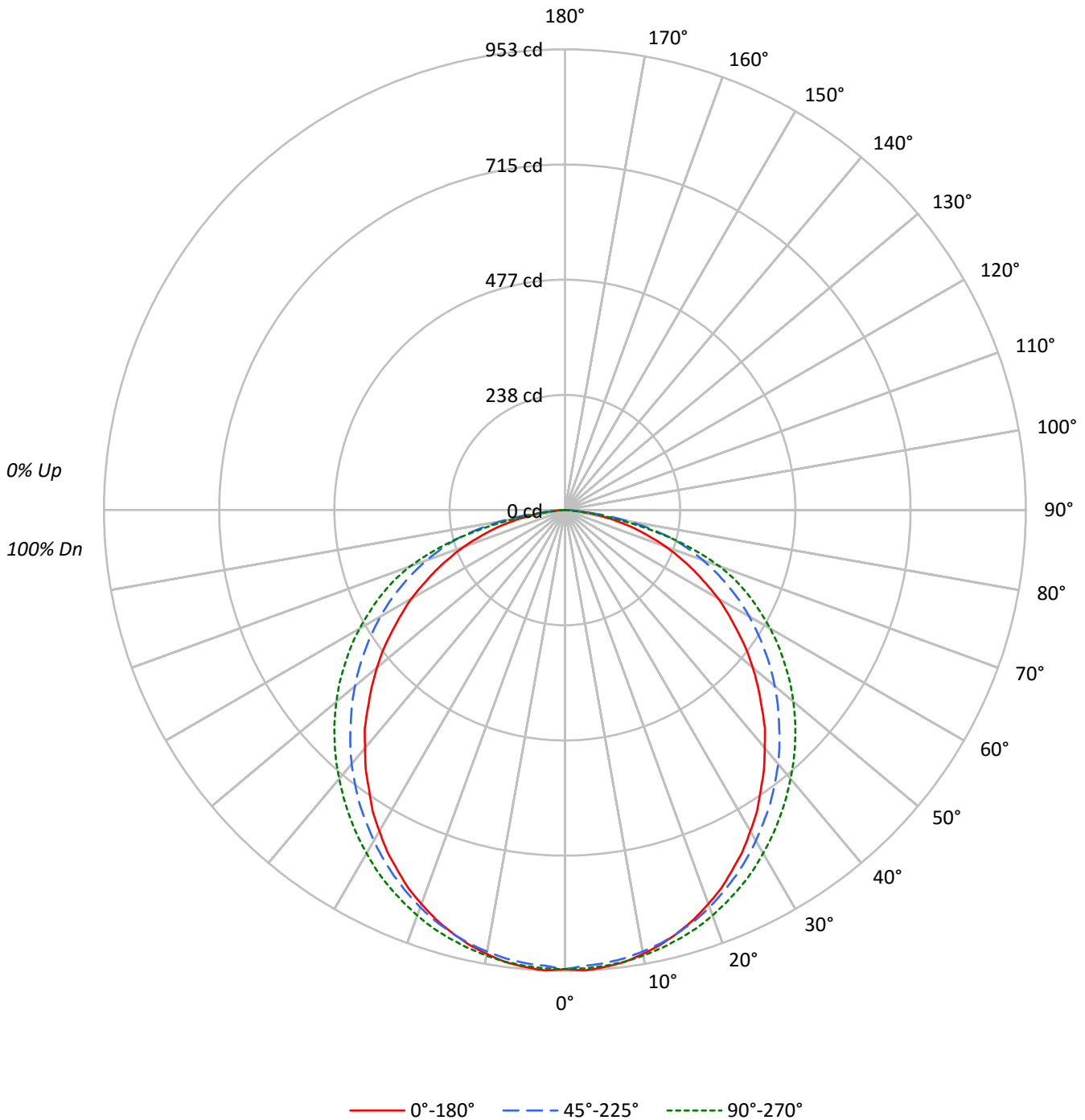
Input Watts (W): 25
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2555	2555	2555
5°	2563	2541	2556
10°	2547	2534	2557
15°	2520	2522	2556
20°	2483	2504	2555
25°	2436	2480	2553
30°	2383	2454	2547
35°	2320	2433	2546
40°	2258	2409	2550
45°	2189	2383	2563
50°	2125	2372	2581
55°	2044	2364	2603
60°	1971	2368	2639
65°	1870	2375	2681
70°	1755	2393	2679
75°	1591	2415	2421
80°	1305	2086	1723
85°	966	988	398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	3.3
10°-20°	256.6	9.3
20°-30°	386.6	14.0
30°-40°	463.9	16.8
40°-50°	483.5	17.5
50°-60°	447.6	16.2
60°-70°	361.7	13.1
70°-80°	220.5	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°	733.1	26.6
0°-40°	1197.0	43.4
0°-60°	2128.2	77.2
0°-90°	2756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2756.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	949	946	941	948	946	90
15°	905	905	905	918	918	255
25°	820	825	835	856	860	378
35°	706	717	740	768	775	442
45°	575	592	626	661	674	445
55°	436	458	504	543	555	390
65°	294	323	373	410	421	290
75°	153	187	232	236	233	161
85°	31	47	32	18	13	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	949.5	949.5	949.5	949.5	949.5
2.5°	953.1	950.1	943.3	950.1	948.8
5°	948.8	946.4	940.8	947.6	946.4
7.5°	942.7	940.2	935.3	943.3	942.1
10°	932.2	931.0	927.3	936.5	935.9
12.5°	920.0	919.3	917.5	927.9	927.3
15°	904.6	905.2	905.2	917.5	917.5
17.5°	887.4	888.6	891.1	904.6	906.4
20°	867.1	869.6	874.5	889.8	892.3
22.5°	846.2	848.1	855.4	873.9	876.3
25°	820.4	825.3	835.1	856.0	859.7
27.5°	795.8	800.1	813.6	835.1	841.3
30°	766.9	773.7	789.7	813.0	819.8
32.5°	739.3	746.7	765.1	792.1	798.3
35°	706.1	717.2	740.5	767.5	774.9
37.5°	676.0	686.4	712.9	742.4	751.0
40°	642.8	655.7	685.8	717.2	725.8
42.5°	612.1	624.4	656.9	688.9	700.6
45°	575.2	592.4	626.2	661.2	673.5
47.5°	541.4	558.6	597.3	634.8	645.9
50°	507.6	526.0	566.6	605.3	616.4
52.5°	472.6	492.2	535.9	574.6	587.5
55°	435.7	458.4	503.9	543.2	554.9
57.5°	400.7	424.0	472.6	512.5	524.2
60°	366.3	390.2	440.0	478.1	490.4
62.5°	328.2	356.4	408.0	445.5	454.8
65°	293.7	322.6	373.0	410.5	421.0
67.5°	257.5	288.8	339.2	373.6	383.5
70°	223.1	255.6	304.2	336.1	340.5
72.5°	186.2	219.4	268.6	288.8	288.8
75°	153.0	186.8	232.3	236.0	232.9
77.5°	116.8	154.2	183.7	176.4	169.0
80°	84.2	121.1	134.6	121.1	111.2
82.5°	56.5	87.9	81.1	64.5	57.2
85°	31.3	46.7	32.0	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)