

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: P309986

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P309986
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 2700K 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: 1863.0 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

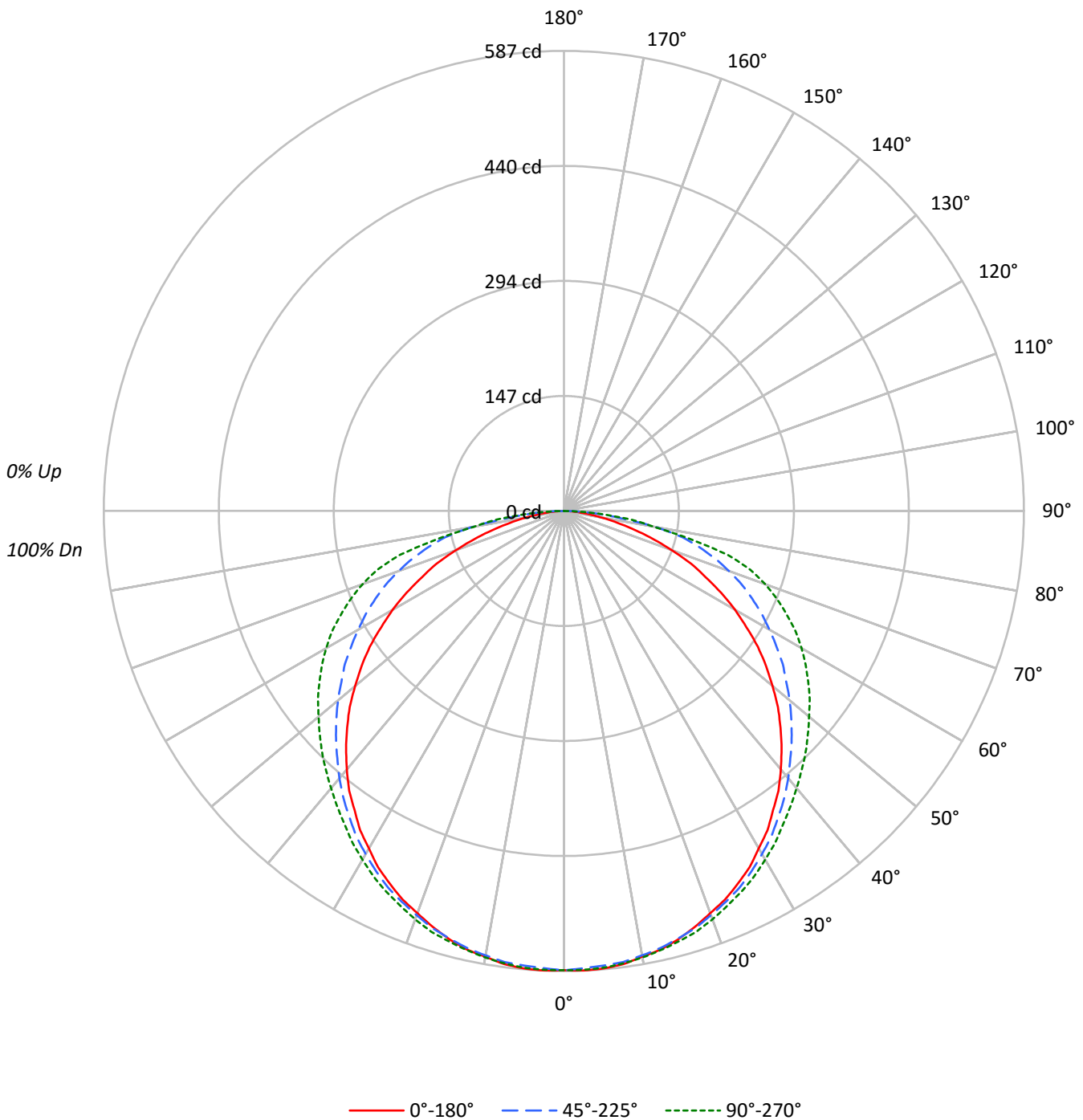
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	788	788	788
5°	791	786	790
10°	789	787	790
15°	788	786	792
20°	782	786	794
25°	779	787	796
30°	772	785	798
35°	765	783	801
40°	756	782	811
45°	744	782	830
50°	727	787	855
55°	709	800	893
60°	679	816	942
65°	635	844	1000
70°	578	883	1076
75°	490	932	1124
80°	387	938	910
85°	286	713	798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	3.0
10°-20°	159.9	8.6
20°-30°	244.6	13.1
30°-40°	299.0	16.0
40°-50°	318.7	17.1
50°-60°	304.7	16.4
60°-70°	258.1	13.9
70°-80°	173.5	9.3
80°-90°	48.9	2.6
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°	460.1	24.7
0°-40°	759.1	40.7
0°-60°	1382.5	74.2
0°-90°	1863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	586	585	582	585	585	56
15°	566	566	565	569	568	159
25°	525	527	530	535	536	242
35°	466	469	477	486	488	292
45°	391	397	411	429	436	302
55°	302	313	341	368	381	269
65°	200	220	265	300	314	198
75°	94	128	179	210	216	101
85°	18	38	46	50	52	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	585.9	585.9	585.9	585.9	585.9
2.5°	586.8	586.8	584.0	585.9	585.9
5°	585.9	584.9	582.2	584.9	584.9
7.5°	583.1	582.2	580.3	583.1	582.2
10°	577.5	577.5	575.7	578.5	578.5
12.5°	572.9	572.0	571.1	574.8	573.8
15°	565.5	565.5	564.6	569.2	568.3
17.5°	556.3	557.2	558.1	561.8	562.8
20°	546.1	548.0	548.9	554.4	554.4
22.5°	536.9	537.8	539.7	545.2	545.2
25°	524.9	526.7	530.4	535.0	536.0
27.5°	512.9	513.8	518.4	524.9	525.8
30°	497.1	499.9	505.5	512.9	513.8
32.5°	483.3	486.1	492.5	499.9	501.8
35°	465.7	469.4	476.8	486.1	487.9
37.5°	450.0	452.8	462.0	472.2	475.0
40°	430.6	436.2	445.4	457.4	462.0
42.5°	411.2	416.8	427.8	443.6	449.1
45°	390.9	397.4	411.2	428.8	436.2
47.5°	370.6	377.9	393.7	414.0	422.3
50°	347.5	356.7	376.1	399.2	408.4
52.5°	325.3	336.4	357.6	383.5	395.5
55°	302.2	313.3	341.0	367.8	380.7
57.5°	276.3	291.1	321.6	352.1	365.9
60°	252.3	266.1	303.1	336.4	350.2
62.5°	226.4	244.9	284.6	319.7	333.6
65°	199.6	219.9	265.2	300.3	314.2
67.5°	175.6	197.8	245.8	280.9	294.8
70°	146.9	174.6	224.5	259.7	273.5
72.5°	120.1	150.6	202.4	236.6	249.5
75°	94.3	128.4	179.3	209.8	216.2
77.5°	70.2	106.3	155.2	168.2	163.6
80°	49.9	85.0	121.1	114.6	117.4
82.5°	32.3	64.7	74.8	85.0	87.8
85°	18.5	37.9	46.2	49.9	51.7
87.5°	8.3	13.9	18.5	18.5	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)