

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: P313512

Luminaire Tested: **24FCZ2-35-UNV-L83050-RDP-CP250-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: P313512
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-L83050-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 2131.0 lumens
Efficiency: N/A
Efficacy: 74.5 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

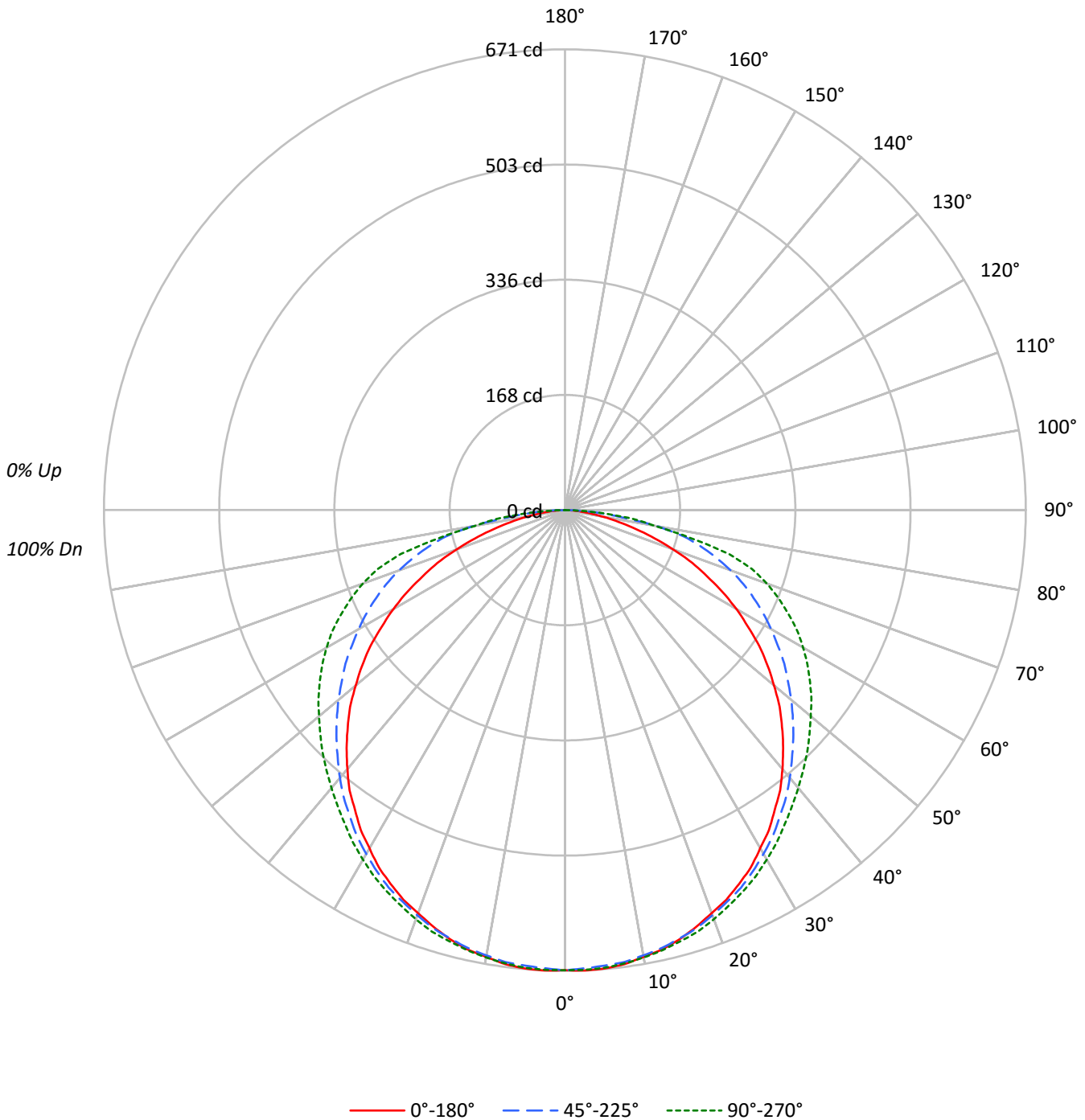
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	902	902	902
5°	905	899	904
10°	903	900	904
15°	901	900	906
20°	894	899	908
25°	891	901	910
30°	884	898	913
35°	875	896	917
40°	865	895	928
45°	851	895	949
50°	832	900	978
55°	811	915	1022
60°	777	933	1078
65°	727	966	1144
70°	661	1011	1231
75°	560	1066	1286
80°	442	1073	1040
85°	326	817	914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	3.0
10°-20°	183.0	8.6
20°-30°	279.8	13.1
30°-40°	342.0	16.0
40°-50°	364.5	17.1
50°-60°	348.5	16.4
60°-70°	295.3	13.9
70°-80°	198.4	9.3
80°-90°	56.0	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°	526.3	24.7
0°-40°	868.3	40.7
0°-60°	1581.3	74.2
0°-90°	2131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2131.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	670	669	666	669	669	64
15°	647	647	646	651	650	182
25°	600	602	607	612	613	277
35°	533	537	545	556	558	334
45°	447	454	470	490	499	345
55°	346	358	390	421	436	308
65°	228	252	303	344	359	227
75°	108	147	205	240	247	115
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	670.1	670.1	670.1	670.1	670.1
2.5°	671.2	671.2	668.0	670.1	670.1
5°	670.1	669.1	665.9	669.1	669.1
7.5°	667.0	665.9	663.8	667.0	665.9
10°	660.6	660.6	658.5	661.7	661.7
12.5°	655.3	654.3	653.2	657.5	656.4
15°	646.9	646.9	645.8	651.1	650.1
17.5°	636.3	637.4	638.4	642.7	643.7
20°	624.7	626.8	627.9	634.2	634.2
22.5°	614.1	615.2	617.3	623.6	623.6
25°	600.4	602.5	606.7	612.0	613.1
27.5°	586.6	587.7	593.0	600.4	601.4
30°	568.7	571.8	578.2	586.6	587.7
32.5°	552.8	556.0	563.4	571.8	574.0
35°	532.7	537.0	545.4	556.0	558.1
37.5°	514.8	517.9	528.5	540.1	543.3
40°	492.6	498.9	509.5	523.2	528.5
42.5°	470.4	476.7	489.4	507.4	513.7
45°	447.1	454.5	470.4	490.4	498.9
47.5°	423.9	432.3	450.3	473.5	483.0
50°	397.4	408.0	430.2	456.6	467.2
52.5°	372.1	384.7	409.1	438.7	452.4
55°	345.6	358.3	390.0	420.7	435.5
57.5°	316.0	333.0	367.8	402.7	418.6
60°	288.6	304.4	346.7	384.7	400.6
62.5°	259.0	280.1	325.6	365.7	381.6
65°	228.3	251.6	303.4	343.5	359.4
67.5°	200.8	226.2	281.2	321.3	337.2
70°	168.1	199.8	256.9	297.0	312.9
72.5°	137.4	172.3	231.5	270.6	285.4
75°	107.8	146.9	205.1	239.9	247.3
77.5°	80.3	121.6	177.6	192.4	187.1
80°	57.1	97.2	138.5	131.1	134.2
82.5°	37.0	74.0	85.6	97.2	100.4
85°	21.1	43.3	52.9	57.1	59.2
87.5°	9.5	15.9	21.1	21.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)