

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: P313562

Luminaire Tested: **24FCZ2-40-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: P313562
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: 24FCZ2-40-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: 2426.0 lumens
Efficiency: N/A
Efficacy: 72.4 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

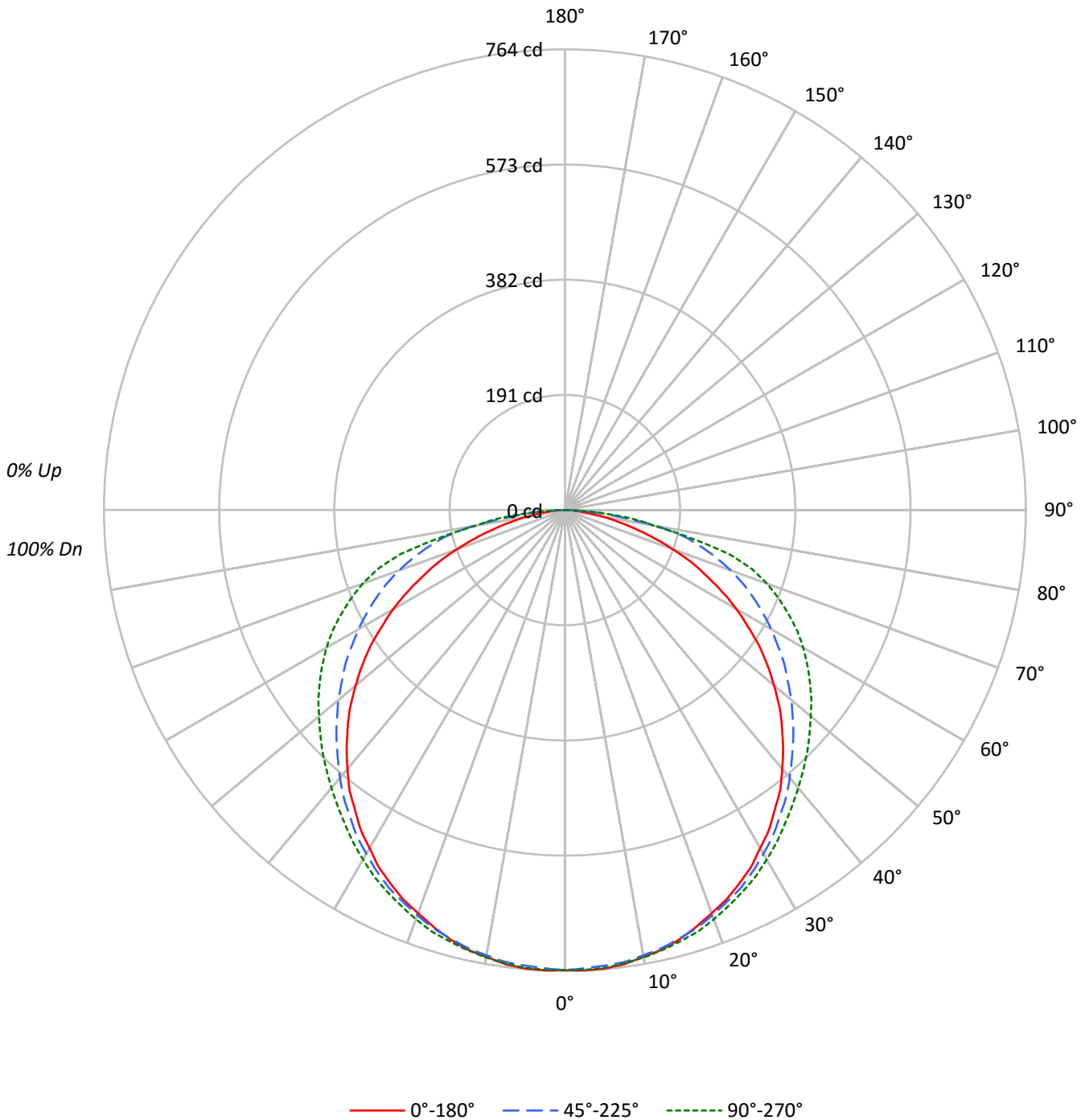
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1026	1026	1026
5°	1030	1024	1029
10°	1028	1024	1029
15°	1026	1024	1031
20°	1018	1023	1034
25°	1015	1025	1036
30°	1006	1023	1039
35°	996	1020	1044
40°	985	1019	1057
45°	969	1019	1081
50°	947	1025	1113
55°	923	1042	1163
60°	884	1062	1227
65°	827	1100	1302
70°	753	1150	1401
75°	638	1213	1464
80°	504	1221	1184
85°	372	929	1041



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	3.0
10°-20°	208.3	8.6
20°-30°	318.5	13.1
30°-40°	389.4	16.0
40°-50°	415.0	17.1
50°-60°	396.8	16.4
60°-70°	336.1	13.9
70°-80°	225.9	9.3
80°-90°	63.7	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°	599.1	24.7
0°-40°	988.5	40.7
0°-60°	1800.3	74.2
0°-90°	2426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2426.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	763	763	763	763	763	
5°	763	762	758	762	762	72
15°	736	736	735	741	740	208
25°	684	686	691	697	698	315
35°	606	611	621	633	635	380
45°	509	517	536	558	568	393
55°	394	408	444	479	496	350
65°	260	286	345	391	409	258
75°	123	167	233	273	282	131
85°	24	49	60	65	67	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	762.9	762.9	762.9	762.9	762.9
2.5°	764.1	764.1	760.5	762.9	762.9
5°	762.9	761.7	758.1	761.7	761.7
7.5°	759.3	758.1	755.7	759.3	758.1
10°	752.1	752.1	749.7	753.3	753.3
12.5°	746.1	744.9	743.7	748.5	747.3
15°	736.4	736.4	735.2	741.2	740.0
17.5°	724.4	725.6	726.8	731.6	732.8
20°	711.2	713.6	714.8	722.0	722.0
22.5°	699.1	700.3	702.7	710.0	710.0
25°	683.5	685.9	690.7	696.7	697.9
27.5°	667.8	669.0	675.1	683.5	684.7
30°	647.4	651.0	658.2	667.8	669.0
32.5°	629.3	632.9	641.4	651.0	653.4
35°	606.5	611.3	620.9	632.9	635.4
37.5°	586.0	589.6	601.7	614.9	618.5
40°	560.7	568.0	580.0	595.6	601.7
42.5°	535.5	542.7	557.1	577.6	584.8
45°	509.0	517.4	535.5	558.3	568.0
47.5°	482.5	492.2	512.6	539.1	549.9
50°	452.5	464.5	489.8	519.8	531.9
52.5°	423.6	438.0	465.7	499.4	515.0
55°	393.5	407.9	444.0	478.9	495.8
57.5°	359.8	379.0	418.8	458.5	476.5
60°	328.5	346.6	394.7	438.0	456.1
62.5°	294.8	318.9	370.6	416.4	434.4
65°	259.9	286.4	345.4	391.1	409.1
67.5°	228.6	257.5	320.1	365.8	383.9
70°	191.3	227.4	292.4	338.1	356.2
72.5°	156.4	196.1	263.5	308.1	324.9
75°	122.7	167.3	233.4	273.2	281.6
77.5°	91.5	138.4	202.2	219.0	213.0
80°	65.0	110.7	157.6	149.2	152.8
82.5°	42.1	84.2	97.5	110.7	114.3
85°	24.1	49.3	60.2	65.0	67.4
87.5°	10.8	18.0	24.1	24.1	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)