

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: P310084

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-6500K**

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: P310084
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-L82765-RDP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 6500K 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: 2415.0 lumens
Efficiency: N/A
Efficacy: 70.6 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

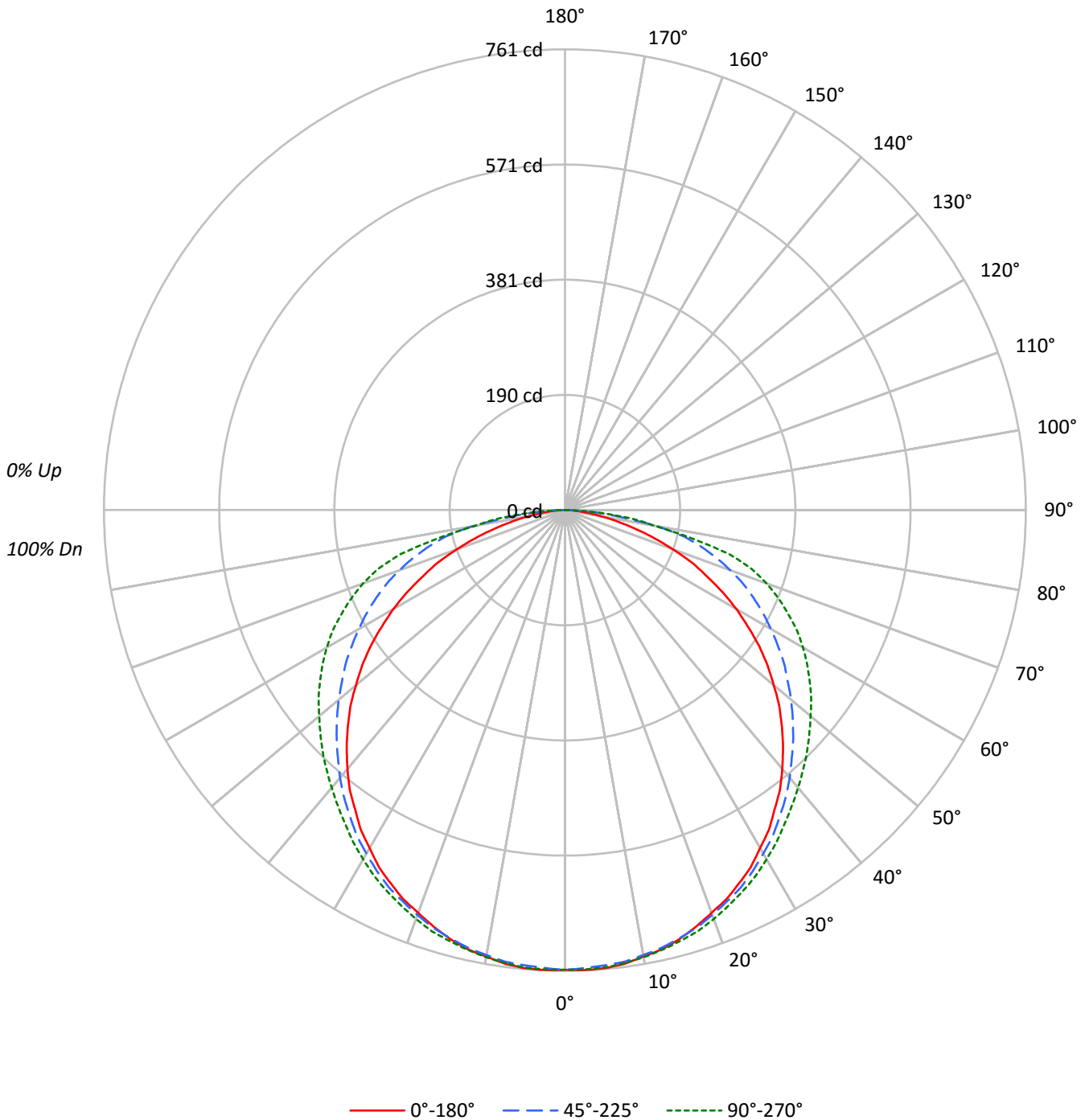
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310084

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P310084

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-6500K

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°	1022	1022	1022
5°	1026	1019	1024
10°	1023	1020	1025
15°	1021	1020	1026
20°	1014	1019	1029
25°	1010	1021	1031
30°	1001	1018	1035
35°	992	1015	1039
40°	980	1014	1052
45°	964	1014	1076
50°	943	1020	1108
55°	919	1037	1158
60°	880	1057	1222
65°	824	1095	1297
70°	749	1145	1395
75°	635	1208	1457
80°	501	1216	1179
85°	371	925	1036



TEST NUMBER: P310084

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	3.0
10°-20°	207.3	8.6
20°-30°	317.1	13.1
30°-40°	387.6	16.0
40°-50°	413.1	17.1
50°-60°	395.0	16.4
60°-70°	334.6	13.9
70°-80°	224.9	9.3
80°-90°	63.4	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°	596.4	24.7
0°-40°	984.0	40.7
0°-60°	1792.1	74.2
0°-90°	2415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	759	758	755	758	758	72
15°	733	733	732	738	737	207
25°	680	683	688	694	695	314
35°	604	608	618	630	632	378
45°	507	515	533	556	565	391
55°	392	406	442	477	494	349
65°	259	285	344	389	407	257
75°	122	166	232	272	280	131
85°	24	49	60	65	67	30
90°	0	0	0	0	0	



TEST NUMBER: P310084

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	759.4	759.4	759.4	759.4	759.4
2.5°	760.6	760.6	757.1	759.4	759.4
5°	759.4	758.3	754.7	758.3	758.3
7.5°	755.9	754.7	752.3	755.9	754.7
10°	748.7	748.7	746.3	749.9	749.9
12.5°	742.7	741.5	740.3	745.1	743.9
15°	733.1	733.1	731.9	737.9	736.7
17.5°	721.1	722.3	723.5	728.3	729.5
20°	707.9	710.3	711.5	718.7	718.7
22.5°	696.0	697.2	699.6	706.7	706.7
25°	680.4	682.8	687.6	693.6	694.8
27.5°	664.8	666.0	672.0	680.4	681.6
30°	644.5	648.0	655.2	664.8	666.0
32.5°	626.5	630.1	638.5	648.0	650.4
35°	603.7	608.5	618.1	630.1	632.5
37.5°	583.4	587.0	598.9	612.1	615.7
40°	558.2	565.4	577.4	592.9	598.9
42.5°	533.1	540.2	554.6	575.0	582.2
45°	506.7	515.1	533.1	555.8	565.4
47.5°	480.3	489.9	510.3	536.6	547.4
50°	450.4	462.4	487.5	517.5	529.5
52.5°	421.6	436.0	463.6	497.1	512.7
55°	391.7	406.1	442.0	476.8	493.5
57.5°	358.2	377.3	416.9	456.4	474.4
60°	327.0	345.0	392.9	436.0	454.0
62.5°	293.5	317.4	368.9	414.5	432.4
65°	258.7	285.1	343.8	389.3	407.3
67.5°	227.6	256.3	318.6	364.2	382.1
70°	190.5	226.4	291.1	336.6	354.6
72.5°	155.7	195.3	262.3	306.7	323.4
75°	122.2	166.5	232.4	271.9	280.3
77.5°	91.0	137.8	201.2	218.0	212.0
80°	64.7	110.2	156.9	148.5	152.1
82.5°	41.9	83.9	97.0	110.2	113.8
85°	24.0	49.1	59.9	64.7	67.1
87.5°	10.8	18.0	24.0	24.0	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)