

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: P310758

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP250-W2A-U-5700K**

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: P310758
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5700K 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: 3581.0 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

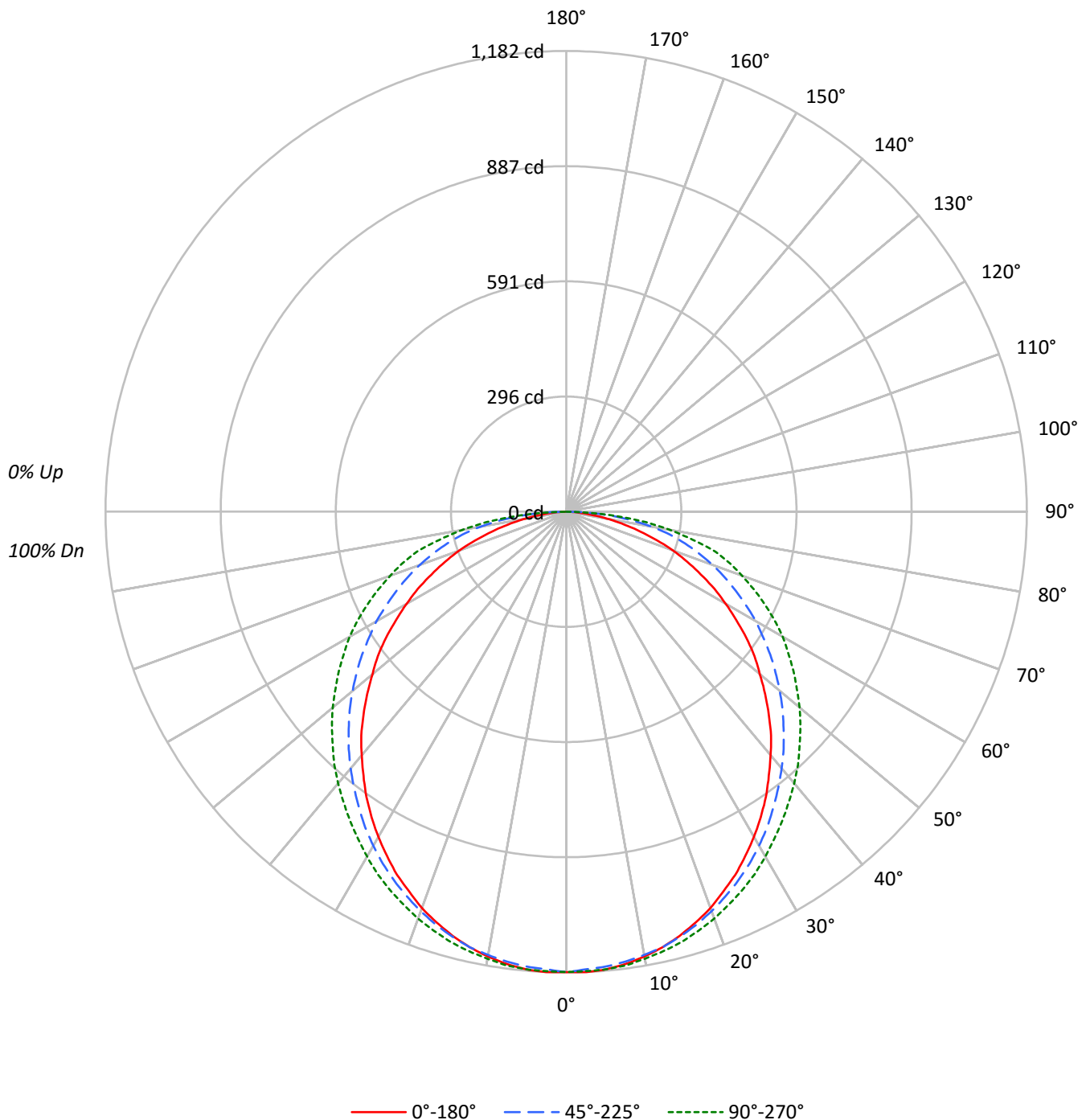
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310758

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CP250-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P310758

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CP250-W2A-U-5700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1589	1589	1589
5°	1592	1582	1592
10°	1583	1578	1591
15°	1569	1572	1592
20°	1550	1562	1591
25°	1526	1550	1589
30°	1497	1538	1588
35°	1468	1522	1588
40°	1434	1511	1599
45°	1399	1501	1612
50°	1358	1497	1636
55°	1324	1499	1669
60°	1273	1512	1727
65°	1214	1528	1789
70°	1150	1575	1888
75°	1025	1643	2063
80°	875	1740	2108
85°	624	1724	2018



TEST NUMBER: P310758

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CP250-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	3.1
10°-20°	319.6	8.9
20°-30°	482.7	13.5
30°-40°	581.8	16.2
40°-50°	610.7	17.1
50°-60°	571.4	16.0
60°-70°	471.9	13.2
70°-80°	321.5	9.0
80°-90°	109.7	3.1
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°	914.0	25.5
0°-40°	1495.8	41.8
0°-60°	2677.9	74.8
0°-90°	3581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1179	1177	1172	1179	1179	112
15°	1126	1128	1129	1141	1143	317
25°	1028	1032	1044	1064	1070	473
35°	894	903	927	958	967	558
45°	735	751	789	832	847	567
55°	564	587	639	692	712	504
65°	381	414	480	541	562	378
75°	197	242	316	375	397	210
85°	40	80	112	126	131	51
90°	0	0	0	0	0	



TEST NUMBER: P310758

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CP250-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1181.0	1181.0	1181.0	1181.0	1181.0
2.5°	1182.2	1181.0	1175.0	1181.0	1179.8
5°	1178.6	1177.4	1171.5	1178.6	1178.6
7.5°	1170.3	1170.3	1164.3	1172.7	1173.9
10°	1158.4	1158.4	1154.8	1164.3	1164.3
12.5°	1144.2	1144.2	1144.2	1153.7	1154.8
15°	1126.3	1127.5	1128.7	1140.6	1143.0
17.5°	1104.9	1107.3	1110.9	1125.1	1127.5
20°	1082.4	1084.7	1090.7	1107.3	1110.9
22.5°	1053.9	1059.8	1068.1	1087.1	1090.7
25°	1027.7	1032.5	1044.3	1064.5	1070.5
27.5°	995.6	1002.8	1018.2	1039.6	1047.9
30°	963.6	970.7	989.7	1014.6	1021.8
32.5°	929.1	939.8	960.0	986.1	994.4
35°	893.5	903.0	926.7	957.6	967.1
37.5°	854.3	867.3	893.5	926.7	938.6
40°	816.2	830.5	860.2	895.8	910.1
42.5°	778.2	792.5	825.7	866.1	880.4
45°	735.4	750.9	788.9	831.7	847.1
47.5°	692.7	711.7	753.3	798.4	815.0
50°	648.7	670.1	715.2	762.8	781.8
52.5°	609.5	629.7	677.2	728.3	746.1
55°	564.4	586.9	639.2	691.5	711.7
57.5°	518.0	543.0	598.8	655.8	676.0
60°	472.9	500.2	562.0	619.0	641.6
62.5°	428.9	456.2	520.4	579.8	602.4
65°	381.4	413.5	480.0	540.6	562.0
67.5°	336.2	370.7	440.8	500.2	521.6
70°	292.3	325.5	400.4	458.6	480.0
72.5°	244.8	282.8	357.6	418.2	440.8
75°	197.2	242.4	316.0	375.4	396.8
77.5°	153.3	199.6	273.3	322.0	332.7
80°	112.9	160.4	224.6	259.0	272.1
82.5°	72.5	120.0	171.1	196.0	206.7
85°	40.4	79.6	111.7	125.9	130.7
87.5°	16.6	34.5	45.1	51.1	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)