

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: P310650

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP125-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: P310650
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: 24FCZ2-35-UNV-L82765-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 3312.0 lumens
Efficiency: N/A
Efficacy: 115.0 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

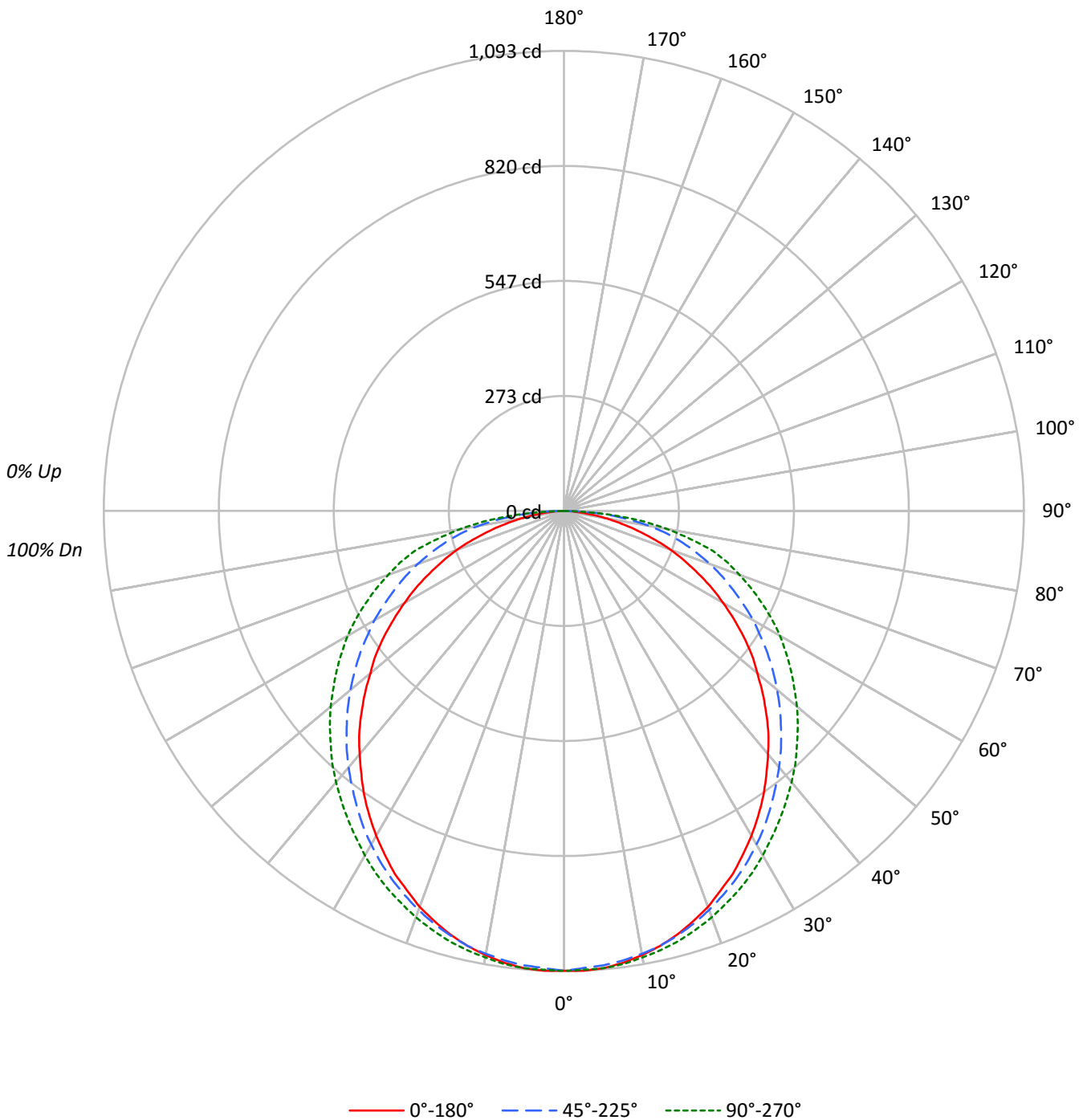
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310650

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P310650

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-5700K

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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1470	1470	1470
5°	1472	1463	1472
10°	1464	1459	1471
15°	1451	1454	1472
20°	1433	1444	1471
25°	1411	1434	1470
30°	1385	1422	1468
35°	1357	1408	1469
40°	1326	1397	1478
45°	1294	1388	1491
50°	1256	1385	1514
55°	1225	1387	1544
60°	1177	1399	1597
65°	1123	1413	1655
70°	1063	1457	1746
75°	948	1520	1908
80°	809	1609	1949
85°	577	1595	1866



TEST NUMBER: P310650

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	3.1
10°-20°	295.6	8.9
20°-30°	446.4	13.5
30°-40°	538.1	16.2
40°-50°	564.9	17.1
50°-60°	528.5	16.0
60°-70°	436.4	13.2
70°-80°	297.4	9.0
80°-90°	101.4	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°	845.4	25.5
0°-40°	1383.4	41.8
0°-60°	2476.8	74.8
0°-90°	3312.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3312.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1092	1092	1092	1092	1092	
5°	1090	1089	1084	1090	1090	103
15°	1042	1043	1044	1055	1057	294
25°	950	955	966	985	990	437
35°	826	835	857	886	894	516
45°	680	694	730	769	784	525
55°	522	543	591	640	658	466
65°	353	382	444	500	520	350
75°	182	224	292	347	367	195
85°	37	74	103	116	121	47
90°	0	0	0	0	0	



TEST NUMBER: P310650

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1092.3	1092.3	1092.3	1092.3	1092.3
2.5°	1093.4	1092.3	1086.8	1092.3	1091.2
5°	1090.1	1089.0	1083.5	1090.1	1090.1
7.5°	1082.4	1082.4	1076.9	1084.6	1085.7
10°	1071.4	1071.4	1068.1	1076.9	1076.9
12.5°	1058.2	1058.2	1058.2	1067.0	1068.1
15°	1041.7	1042.8	1043.9	1054.9	1057.1
17.5°	1021.9	1024.1	1027.4	1040.6	1042.8
20°	1001.1	1003.3	1008.8	1024.1	1027.4
22.5°	974.7	980.2	987.9	1005.5	1008.8
25°	950.5	954.9	965.9	984.6	990.1
27.5°	920.8	927.4	941.7	961.5	969.2
30°	891.2	897.8	915.4	938.4	945.0
32.5°	859.3	869.2	887.9	912.1	919.7
35°	826.3	835.1	857.1	885.7	894.5
37.5°	790.1	802.2	826.3	857.1	868.1
40°	754.9	768.1	795.6	828.5	841.7
42.5°	719.8	732.9	763.7	801.1	814.3
45°	680.2	694.5	729.6	769.2	783.5
47.5°	640.6	658.2	696.7	738.4	753.8
50°	600.0	619.8	661.5	705.5	723.1
52.5°	563.7	582.4	626.4	673.6	690.1
55°	522.0	542.8	591.2	639.5	658.2
57.5°	479.1	502.2	553.8	606.6	625.3
60°	437.3	462.6	519.8	572.5	593.4
62.5°	396.7	422.0	481.3	536.2	557.1
65°	352.7	382.4	443.9	500.0	519.8
67.5°	311.0	342.8	407.7	462.6	482.4
70°	270.3	301.1	370.3	424.2	443.9
72.5°	226.4	261.5	330.8	386.8	407.7
75°	182.4	224.2	292.3	347.2	367.0
77.5°	141.8	184.6	252.7	297.8	307.7
80°	104.4	148.3	207.7	239.6	251.6
82.5°	67.0	111.0	158.2	181.3	191.2
85°	37.4	73.6	103.3	116.5	120.9
87.5°	15.4	31.9	41.8	47.3	47.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)