

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: P310623

Luminaire Tested: **24FCZ2-35HE-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: P310623
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: 24FCZ2-35HE-UNV-L82765-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 3113.0 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

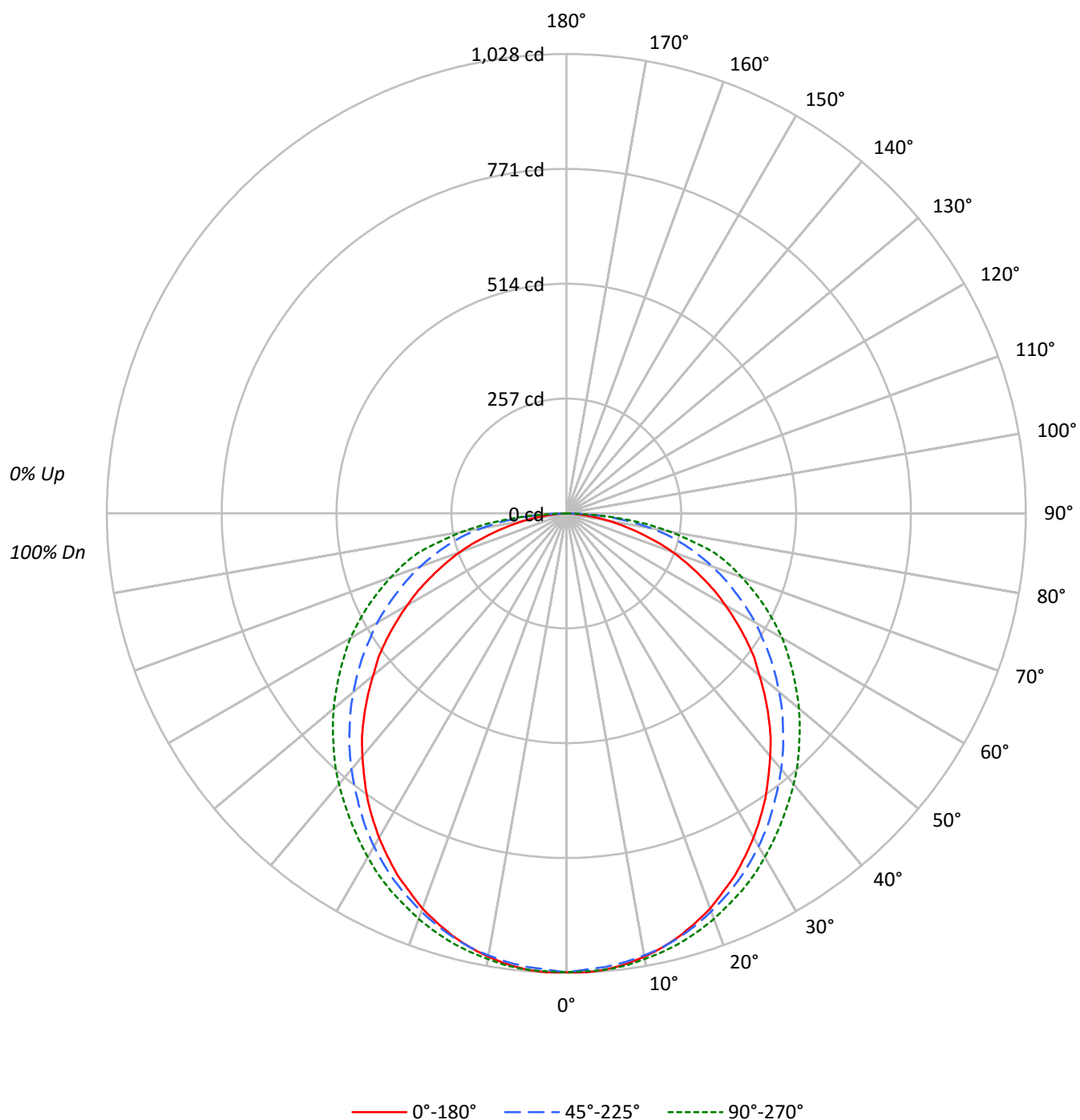
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310623

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-CP250-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P310623

CATALOG NUMBER: 24FCZ2-35HE-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°	1381	1381	1381
5°	1384	1375	1384
10°	1376	1372	1383
15°	1364	1367	1384
20°	1347	1358	1383
25°	1326	1348	1382
30°	1301	1337	1380
35°	1276	1323	1381
40°	1246	1313	1390
45°	1216	1305	1401
50°	1180	1302	1423
55°	1151	1304	1451
60°	1106	1315	1501
65°	1055	1329	1555
70°	1000	1369	1642
75°	892	1428	1794
80°	760	1512	1832
85°	542	1499	1754



TEST NUMBER: P310623

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-CP250-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	3.1
10°-20°	277.8	8.9
20°-30°	419.6	13.5
30°-40°	505.7	16.2
40°-50°	530.9	17.1
50°-60°	496.7	16.0
60°-70°	410.2	13.2
70°-80°	279.5	9.0
80°-90°	95.3	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°	794.6	25.5
0°-40°	1300.3	41.8
0°-60°	2328.0	74.8
0°-90°	3113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3113.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1027	1027	1027	1027	1027	
5°	1025	1024	1018	1025	1025	97
15°	979	980	981	992	994	276
25°	893	898	908	925	931	411
35°	777	785	806	832	841	485
45°	639	653	686	723	736	493
55°	491	510	556	601	619	438
65°	332	359	417	470	488	329
75°	172	211	275	326	345	183
85°	35	69	97	110	114	44
90°	0	0	0	0	0	



TEST NUMBER: P310623

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-CP250-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1026.6	1026.6	1026.6	1026.6	1026.6
2.5°	1027.7	1026.6	1021.5	1026.6	1025.6
5°	1024.6	1023.5	1018.4	1024.6	1024.6
7.5°	1017.3	1017.3	1012.2	1019.4	1020.4
10°	1007.0	1007.0	1003.9	1012.2	1012.2
12.5°	994.6	994.6	994.6	1002.9	1003.9
15°	979.1	980.2	981.2	991.5	993.6
17.5°	960.5	962.6	965.7	978.1	980.2
20°	940.9	943.0	948.1	962.6	965.7
22.5°	916.1	921.3	928.5	945.0	948.1
25°	893.4	897.5	907.9	925.4	930.6
27.5°	865.5	871.7	885.1	903.7	911.0
30°	837.6	843.8	860.4	882.0	888.2
32.5°	807.7	817.0	834.5	857.3	864.5
35°	776.7	785.0	805.6	832.5	840.7
37.5°	742.6	754.0	776.7	805.6	815.9
40°	709.6	722.0	747.8	778.8	791.2
42.5°	676.5	688.9	717.8	752.9	765.3
45°	639.3	652.8	685.8	723.0	736.4
47.5°	602.1	618.7	654.8	694.1	708.5
50°	563.9	582.5	621.8	663.1	679.6
52.5°	529.8	547.4	588.7	633.1	648.6
55°	490.6	510.2	555.7	601.1	618.7
57.5°	450.3	472.0	520.6	570.1	587.7
60°	411.1	434.8	488.5	538.1	557.7
62.5°	372.9	396.6	452.4	504.0	523.6
65°	331.5	359.4	417.3	469.9	488.5
67.5°	292.3	322.2	383.2	434.8	453.4
70°	254.1	283.0	348.1	398.7	417.3
72.5°	212.8	245.8	310.9	363.6	383.2
75°	171.5	210.7	274.7	326.4	345.0
77.5°	133.2	173.5	237.6	279.9	289.2
80°	98.1	139.4	195.2	225.2	236.5
82.5°	63.0	104.3	148.7	170.4	179.7
85°	35.1	69.2	97.1	109.5	113.6
87.5°	14.5	30.0	39.2	44.4	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)