

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: P311298

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-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: P311298
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 3271.0 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

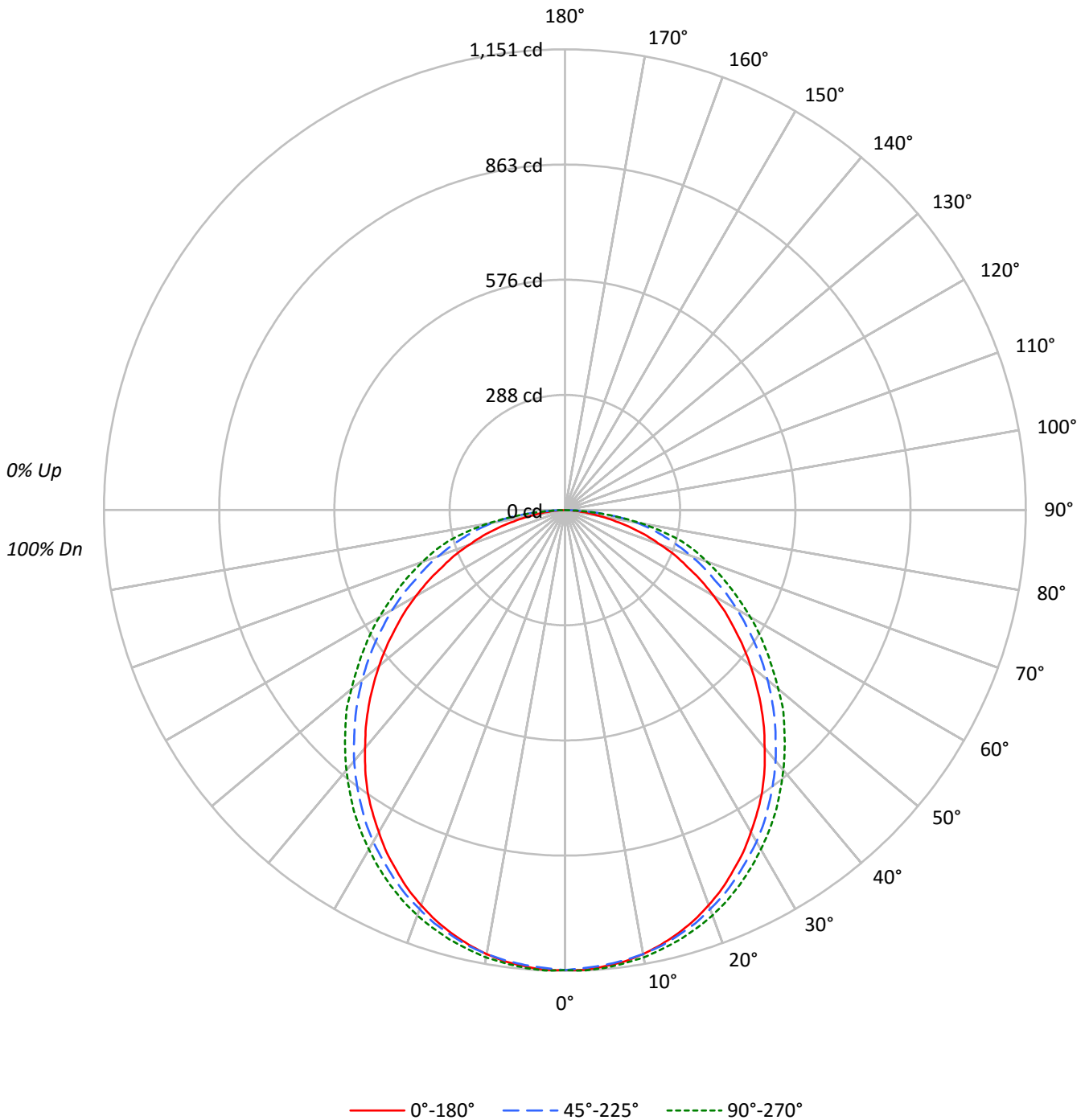
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311298

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

Luminous Intensity Polar Plot





TEST NUMBER: P311298

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-S-CP250-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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1546	1546	1546
5°	1545	1541	1551
10°	1539	1539	1550
15°	1524	1531	1547
20°	1504	1519	1543
25°	1476	1504	1533
30°	1443	1487	1521
35°	1411	1463	1509
40°	1363	1438	1491
45°	1319	1410	1475
50°	1268	1383	1457
55°	1211	1358	1443
60°	1155	1336	1440
65°	1082	1313	1449
70°	1002	1320	1488
75°	897	1345	1572
80°	724	1425	1537
85°	545	1250	1220



TEST NUMBER: P311298

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.8	3.3
10°-20°	310.8	9.5
20°-30°	467.3	14.3
30°-40°	556.6	17.0
40°-50°	569.7	17.4
50°-60°	512.8	15.7
60°-70°	402.8	12.3
70°-80°	261.4	8.0
80°-90°	80.9	2.5
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°	886.9	27.1
0°-40°	1443.5	44.1
0°-60°	2526.0	77.2
0°-90°	3271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3271.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1149	1149	1149	1149	1149	
5°	1144	1146	1141	1147	1148	109
15°	1094	1097	1099	1109	1111	308
25°	994	1003	1013	1030	1033	458
35°	859	870	890	912	918	536
45°	693	710	741	769	775	534
55°	516	539	579	609	615	463
65°	340	366	412	447	455	338
75°	172	206	259	294	302	183
85°	35	66	81	79	79	43
90°	0	0	0	0	0	



TEST NUMBER: P311298

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1149.1	1149.1	1149.1	1149.1	1149.1
2.5°	1150.2	1150.2	1145.0	1150.2	1151.2
5°	1143.9	1146.0	1140.8	1147.0	1148.1
7.5°	1137.7	1137.7	1134.6	1140.8	1141.9
10°	1126.3	1127.3	1126.3	1133.5	1134.6
12.5°	1111.7	1113.8	1114.8	1122.1	1123.1
15°	1094.1	1097.2	1099.3	1108.6	1110.7
17.5°	1074.3	1077.4	1082.6	1093.0	1095.1
20°	1050.4	1054.6	1060.8	1074.3	1077.4
22.5°	1024.4	1028.6	1039.0	1051.5	1056.7
25°	994.3	1002.6	1013.0	1029.6	1032.8
27.5°	964.2	971.5	985.0	1002.6	1006.8
30°	928.9	940.3	956.9	974.6	978.7
32.5°	894.6	906.0	925.7	944.4	949.6
35°	859.2	869.6	890.4	912.2	918.5
37.5°	818.7	832.2	855.1	876.9	883.1
40°	776.1	792.7	818.7	841.6	848.9
42.5°	735.6	753.3	779.2	804.2	812.5
45°	693.0	709.6	740.8	768.9	775.1
47.5°	649.4	668.1	701.3	729.4	739.8
50°	605.7	625.5	660.8	689.9	696.1
52.5°	562.1	582.9	620.3	651.4	654.6
55°	516.4	539.2	578.7	608.8	615.1
57.5°	474.8	494.6	537.2	568.3	575.6
60°	429.1	450.9	496.6	525.7	535.1
62.5°	385.5	408.3	456.1	485.2	493.5
65°	339.7	365.7	412.5	446.8	455.1
67.5°	300.3	325.2	375.1	408.3	416.6
70°	254.6	282.6	335.6	369.9	378.2
72.5°	215.1	244.2	297.2	330.4	342.9
75°	172.5	205.7	258.7	294.0	302.3
77.5°	130.9	169.4	223.4	250.4	250.4
80°	93.5	134.0	183.9	196.4	198.4
82.5°	61.3	100.8	136.1	135.1	135.1
85°	35.3	65.5	81.0	79.0	79.0
87.5°	13.5	27.0	29.1	29.1	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)