

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: P310663

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP250-W2A-U-3500K**

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: P310663
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 2948.0 lumens
Efficiency: N/A
Efficacy: 104.9 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

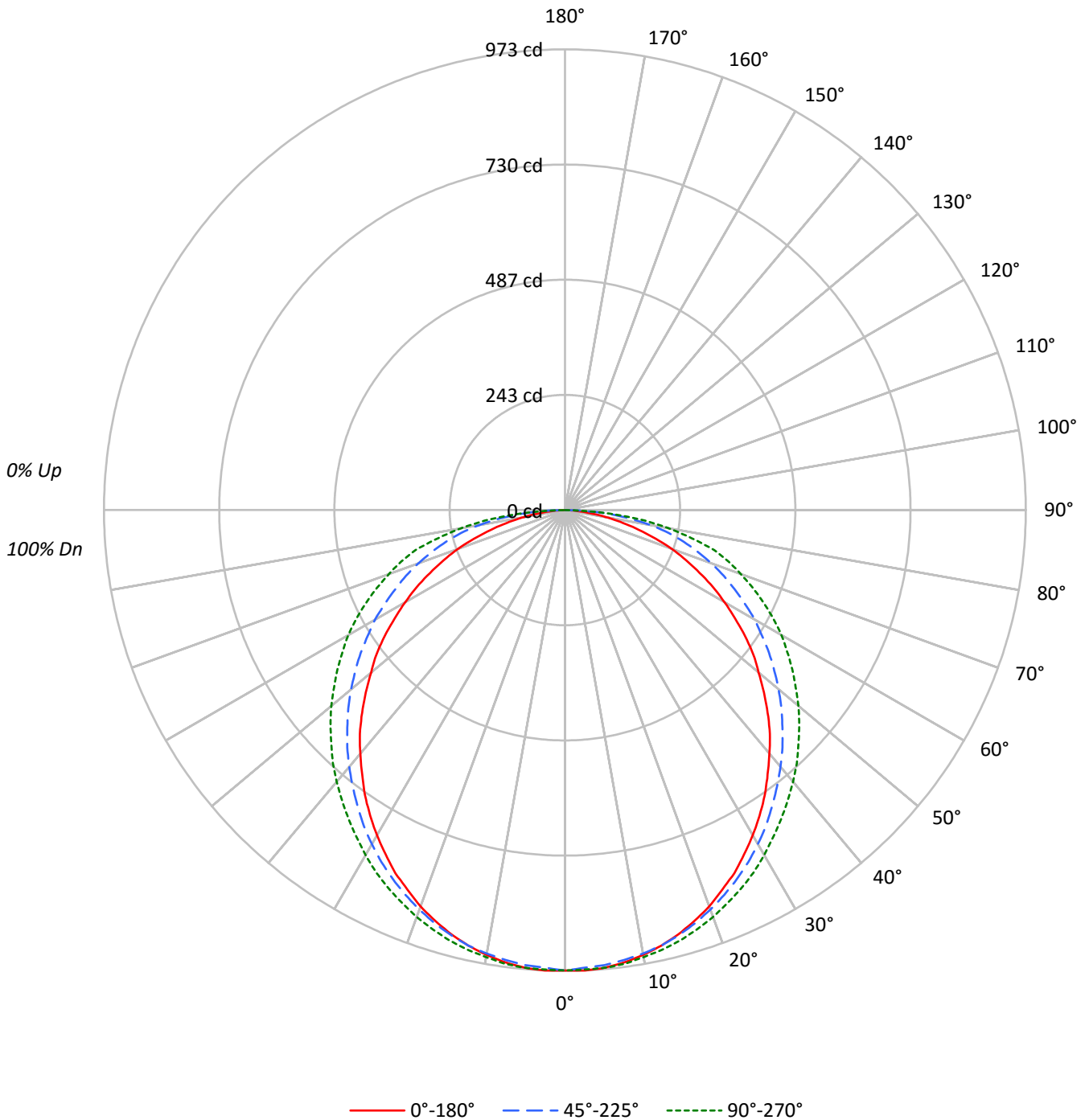
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310663

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP250-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P310663

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP250-W2A-U-3500K

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°	1308	1308	1308
5°	1311	1303	1311
10°	1303	1299	1310
15°	1292	1294	1311
20°	1276	1286	1309
25°	1256	1276	1308
30°	1232	1266	1307
35°	1208	1253	1308
40°	1180	1244	1316
45°	1152	1236	1327
50°	1118	1232	1347
55°	1090	1234	1374
60°	1048	1245	1421
65°	1000	1258	1473
70°	947	1297	1554
75°	844	1353	1698
80°	720	1433	1736
85°	514	1419	1661



TEST NUMBER: P310663

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP250-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	3.1
10°-20°	263.1	8.9
20°-30°	397.4	13.5
30°-40°	478.9	16.2
40°-50°	502.8	17.1
50°-60°	470.4	16.0
60°-70°	388.5	13.2
70°-80°	264.7	9.0
80°-90°	90.3	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°	752.5	25.5
0°-40°	1231.4	41.8
0°-60°	2204.6	74.8
0°-90°	2948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	970	969	964	970	970	92
15°	927	928	929	939	941	261
25°	846	850	860	876	881	389
35°	736	743	763	788	796	460
45°	605	618	650	685	697	467
55°	465	483	526	569	586	415
65°	314	340	395	445	463	311
75°	162	200	260	309	327	173
85°	33	66	92	104	108	42
90°	0	0	0	0	0	



TEST NUMBER: P310663

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP250-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	972.2	972.2	972.2	972.2	972.2
2.5°	973.2	972.2	967.3	972.2	971.2
5°	970.3	969.3	964.4	970.3	970.3
7.5°	963.4	963.4	958.5	965.4	966.4
10°	953.6	953.6	950.7	958.5	958.5
12.5°	941.9	941.9	941.9	949.7	950.7
15°	927.2	928.2	929.2	939.0	940.9
17.5°	909.6	911.6	914.5	926.3	928.2
20°	891.0	893.0	897.9	911.6	914.5
22.5°	867.6	872.5	879.3	895.0	897.9
25°	846.1	850.0	859.7	876.4	881.3
27.5°	819.6	825.5	838.2	855.8	862.7
30°	793.2	799.1	814.8	835.3	841.2
32.5°	764.9	773.7	790.3	811.8	818.7
35°	735.5	743.4	762.9	788.3	796.2
37.5°	703.2	714.0	735.5	762.9	772.7
40°	672.0	683.7	708.1	737.5	749.2
42.5°	640.7	652.4	679.8	713.0	724.8
45°	605.4	618.2	649.5	684.7	697.4
47.5°	570.2	585.9	620.1	657.3	671.0
50°	534.0	551.6	588.8	627.9	643.6
52.5°	501.8	518.4	557.5	599.6	614.2
55°	464.6	483.2	526.2	569.3	585.9
57.5°	426.4	447.0	493.0	539.9	556.5
60°	389.3	411.8	462.6	509.6	528.2
62.5°	353.1	375.6	428.4	477.3	495.9
65°	314.0	340.4	395.1	445.0	462.6
67.5°	276.8	305.2	362.9	411.8	429.4
70°	240.6	268.0	329.6	377.5	395.1
72.5°	201.5	232.8	294.4	344.3	362.9
75°	162.4	199.5	260.2	309.1	326.7
77.5°	126.2	164.3	225.0	265.1	273.9
80°	92.9	132.0	184.9	213.2	224.0
82.5°	59.7	98.8	140.8	161.4	170.2
85°	33.3	65.5	91.9	103.7	107.6
87.5°	13.7	28.4	37.2	42.1	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)