

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: P310939

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP250-W2A-U-6500K**

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: P310939
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: 24FCZ2-50-UNV-L82765-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 6500K 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: 4436.0 lumens
Efficiency: N/A
Efficacy: 99.5 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

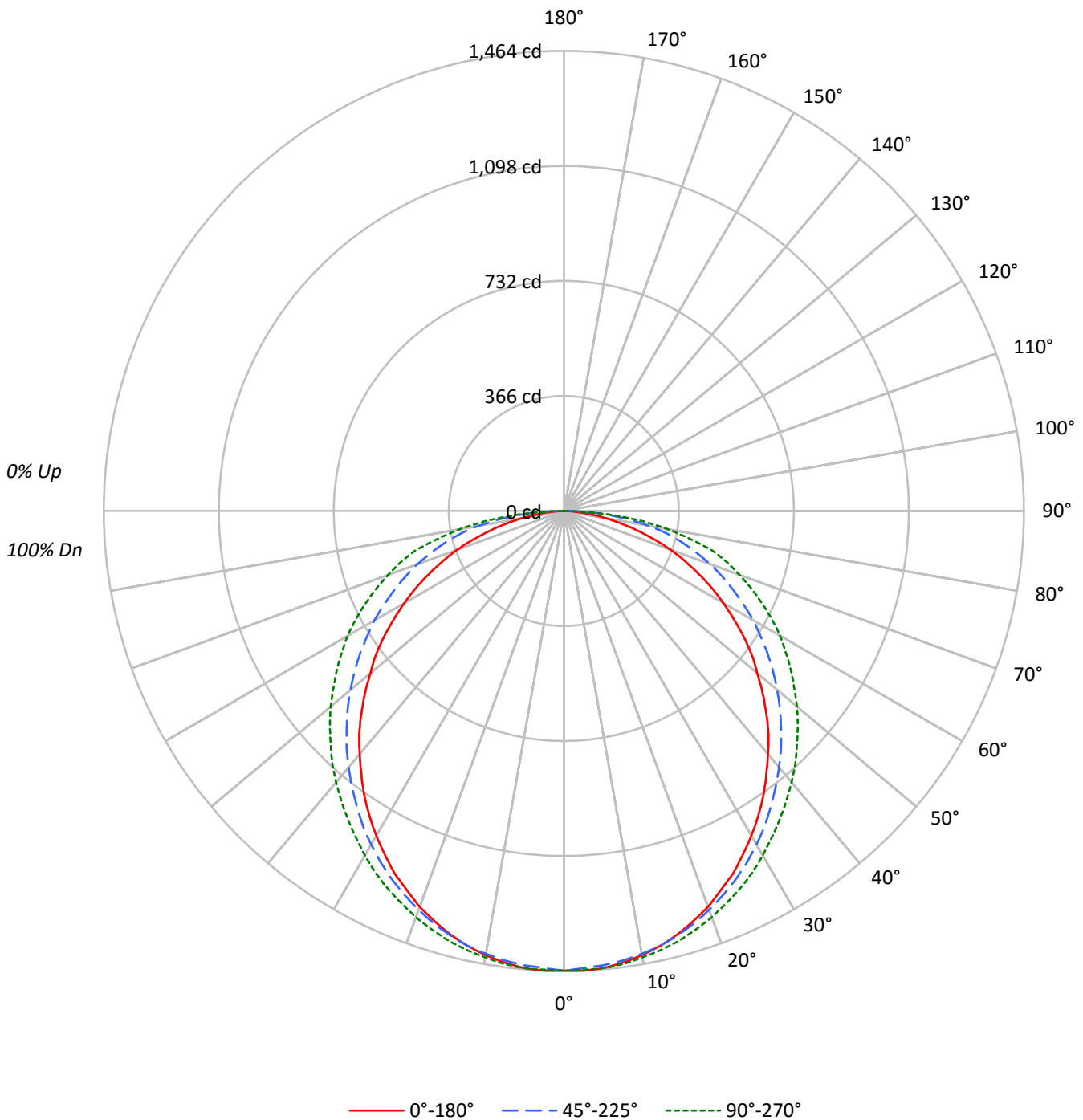
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310939

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP250-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P310939

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP250-W2A-U-6500K

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°	1968	1968	1968
5°	1972	1960	1972
10°	1961	1955	1971
15°	1944	1948	1972
20°	1920	1935	1970
25°	1890	1921	1969
30°	1854	1905	1966
35°	1818	1886	1968
40°	1776	1872	1980
45°	1733	1860	1997
50°	1682	1855	2027
55°	1640	1857	2068
60°	1576	1873	2139
65°	1504	1893	2216
70°	1424	1951	2339
75°	1270	2035	2556
80°	1083	2156	2611
85°	772	2135	2499



TEST NUMBER: P310939

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP250-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.5	3.1
10°-20°	395.9	8.9
20°-30°	597.9	13.5
30°-40°	720.7	16.2
40°-50°	756.6	17.1
50°-60°	707.8	16.0
60°-70°	584.5	13.2
70°-80°	398.3	9.0
80°-90°	135.8	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°	1132.3	25.5
0°-40°	1852.9	41.8
0°-60°	3317.3	74.8
0°-90°	4436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4436.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1463	1463	1463	1463	1463	
5°	1460	1458	1451	1460	1460	139
15°	1395	1397	1398	1413	1416	393
25°	1273	1279	1294	1319	1326	586
35°	1107	1119	1148	1186	1198	692
45°	911	930	977	1030	1049	703
55°	699	727	792	857	882	624
65°	472	512	595	670	696	469
75°	244	300	392	465	492	261
85°	50	99	138	156	162	63
90°	0	0	0	0	0	



TEST NUMBER: P310939

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP250-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1463.0	1463.0	1463.0	1463.0	1463.0
2.5°	1464.4	1463.0	1455.6	1463.0	1461.5
5°	1460.0	1458.5	1451.2	1460.0	1460.0
7.5°	1449.7	1449.7	1442.3	1452.7	1454.1
10°	1435.0	1435.0	1430.6	1442.3	1442.3
12.5°	1417.3	1417.3	1417.3	1429.1	1430.6
15°	1395.3	1396.7	1398.2	1412.9	1415.9
17.5°	1368.8	1371.7	1376.1	1393.8	1396.7
20°	1340.8	1343.7	1351.1	1371.7	1376.1
22.5°	1305.5	1312.8	1323.1	1346.7	1351.1
25°	1273.1	1279.0	1293.7	1318.7	1326.1
27.5°	1233.4	1242.2	1261.3	1287.8	1298.1
30°	1193.6	1202.4	1226.0	1256.9	1265.7
32.5°	1150.9	1164.2	1189.2	1221.6	1231.9
35°	1106.8	1118.6	1148.0	1186.3	1198.0
37.5°	1058.2	1074.4	1106.8	1148.0	1162.7
40°	1011.1	1028.8	1065.6	1109.7	1127.4
42.5°	964.0	981.7	1022.9	1072.9	1090.6
45°	911.0	930.2	977.3	1030.2	1049.4
47.5°	858.1	881.6	933.1	989.0	1009.6
50°	803.6	830.1	886.0	944.9	968.4
52.5°	755.0	780.0	838.9	902.2	924.3
55°	699.1	727.1	791.8	856.6	881.6
57.5°	641.7	672.6	741.8	812.4	837.4
60°	585.8	619.6	696.2	766.8	794.8
62.5°	531.3	565.2	644.6	718.2	746.2
65°	472.4	512.2	594.6	669.7	696.2
67.5°	416.5	459.2	546.0	619.6	646.1
70°	362.1	403.3	496.0	568.1	594.6
72.5°	303.2	350.3	443.0	518.1	546.0
75°	244.3	300.2	391.5	465.1	491.6
77.5°	189.9	247.3	338.5	398.9	412.1
80°	139.8	198.7	278.2	320.8	337.0
82.5°	89.8	148.7	211.9	242.8	256.1
85°	50.0	98.6	138.3	156.0	161.9
87.5°	20.6	42.7	55.9	63.3	63.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)