

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: P314346

Luminaire Tested: **24FCZ2-45-UNV-L83050-S-CA125-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: P314346
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: 24FCZ2-45-UNV-L83050-S-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4338.0 lumens
Efficiency: N/A
Efficacy: 115.4 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

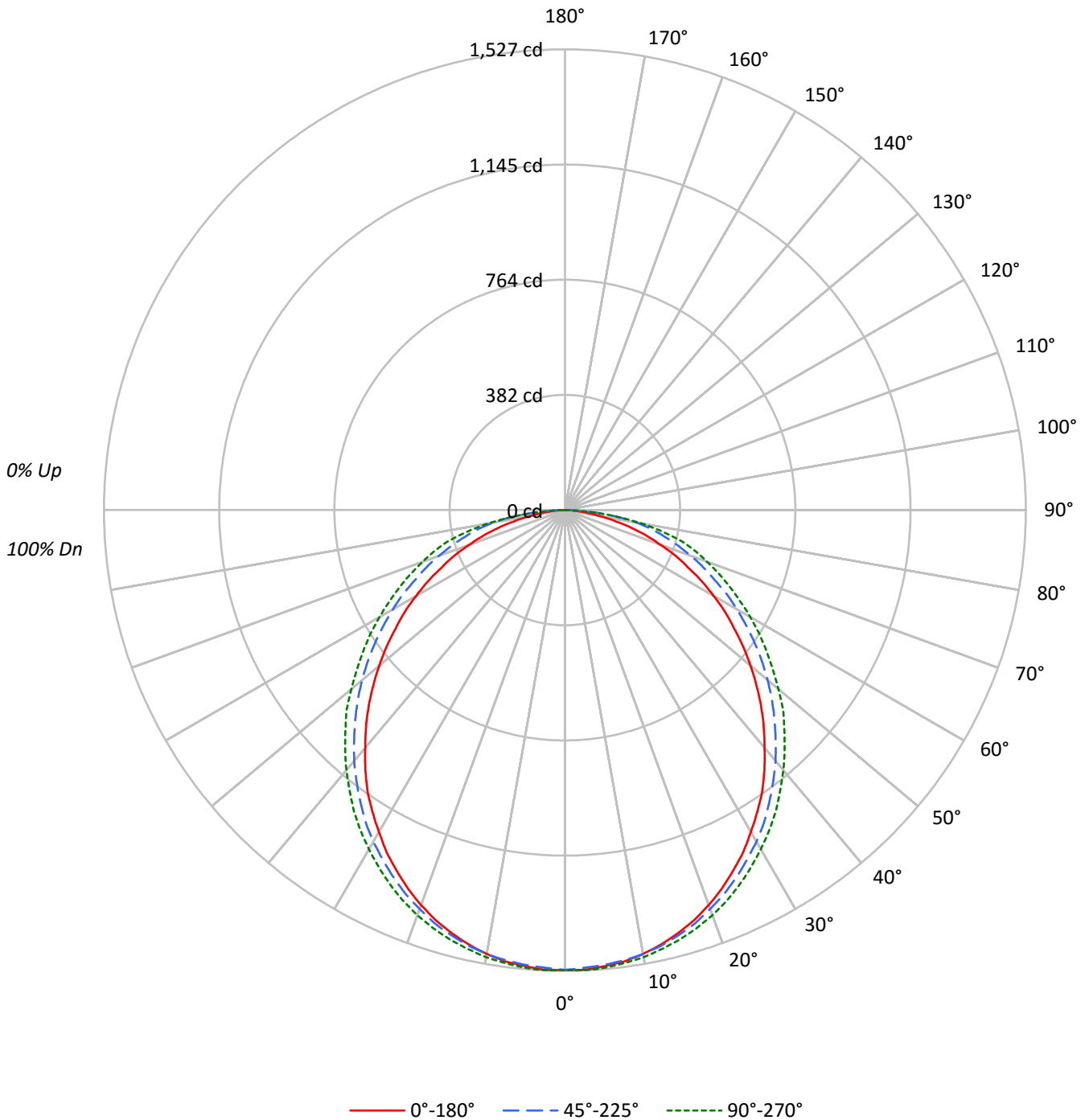
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314346

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CA125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P314346

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CA125-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	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°	2051	2051	2051
5°	2049	2043	2056
10°	2041	2041	2056
15°	2021	2031	2052
20°	1995	2014	2046
25°	1958	1995	2033
30°	1914	1972	2017
35°	1872	1940	2001
40°	1808	1907	1977
45°	1749	1869	1956
50°	1681	1834	1932
55°	1606	1800	1913
60°	1531	1772	1910
65°	1435	1741	1921
70°	1328	1751	1973
75°	1189	1784	2085
80°	961	1890	2039
85°	722	1660	1616



TEST NUMBER: P314346

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CA125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.3	3.3
10°-20°	412.2	9.5
20°-30°	619.7	14.3
30°-40°	738.2	17.0
40°-50°	755.5	17.4
50°-60°	680.1	15.7
60°-70°	534.1	12.3
70°-80°	346.7	8.0
80°-90°	107.2	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°	1176.2	27.1
0°-40°	1914.4	44.1
0°-60°	3350.0	77.2
0°-90°	4338.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4338.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1517	1520	1513	1521	1523	144
15°	1451	1455	1458	1470	1473	409
25°	1319	1330	1344	1366	1370	607
35°	1140	1153	1181	1210	1218	711
45°	919	941	982	1020	1028	709
55°	685	715	768	808	816	614
65°	451	485	547	592	604	449
75°	229	273	343	390	401	242
85°	47	87	108	105	105	57
90°	0	0	0	0	0	



TEST NUMBER: P314346

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CA125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1524.0	1524.0	1524.0	1524.0	1524.0
2.5°	1525.3	1525.3	1518.5	1525.3	1526.7
5°	1517.1	1519.8	1512.9	1521.2	1522.6
7.5°	1508.8	1508.8	1504.7	1512.9	1514.3
10°	1493.7	1495.0	1493.7	1503.3	1504.7
12.5°	1474.4	1477.1	1478.5	1488.1	1489.5
15°	1450.9	1455.1	1457.8	1470.2	1473.0
17.5°	1424.8	1428.9	1435.8	1449.6	1452.3
20°	1393.1	1398.6	1406.8	1424.8	1428.9
22.5°	1358.6	1364.1	1377.9	1394.4	1401.3
25°	1318.7	1329.7	1343.5	1365.5	1369.6
27.5°	1278.7	1288.3	1306.3	1329.7	1335.2
30°	1231.9	1247.0	1269.1	1292.5	1298.0
32.5°	1186.4	1201.5	1227.7	1252.5	1259.4
35°	1139.5	1153.3	1180.9	1209.8	1218.1
37.5°	1085.8	1103.7	1134.0	1163.0	1171.2
40°	1029.3	1051.3	1085.8	1116.1	1125.8
42.5°	975.6	999.0	1033.4	1066.5	1077.5
45°	919.1	941.1	982.4	1019.7	1027.9
47.5°	861.2	886.0	930.1	967.3	981.1
50°	803.3	829.5	876.4	914.9	923.2
52.5°	745.4	773.0	822.6	863.9	868.1
55°	684.8	715.1	767.5	807.5	815.7
57.5°	629.7	655.9	712.4	753.7	763.4
60°	569.1	598.0	658.6	697.2	709.6
62.5°	511.2	541.5	604.9	643.5	654.5
65°	450.6	485.0	547.0	592.5	603.5
67.5°	398.2	431.3	497.4	541.5	552.5
70°	337.6	374.8	445.1	490.5	501.6
72.5°	285.2	323.8	394.1	438.2	454.7
75°	228.7	272.8	343.1	389.9	401.0
77.5°	173.6	224.6	296.3	332.1	332.1
80°	124.0	177.8	243.9	260.4	263.2
82.5°	81.3	133.7	180.5	179.1	179.1
85°	46.8	86.8	107.5	104.7	104.7
87.5°	17.9	35.8	38.6	38.6	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)