

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: P314022

Luminaire Tested: **24FCZ2-50-UNV-L83050-CA125-W2A-U-4000K**

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: P314022
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-L83050-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 4785.0 lumens
Efficiency: N/A
Efficacy: 109.5 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

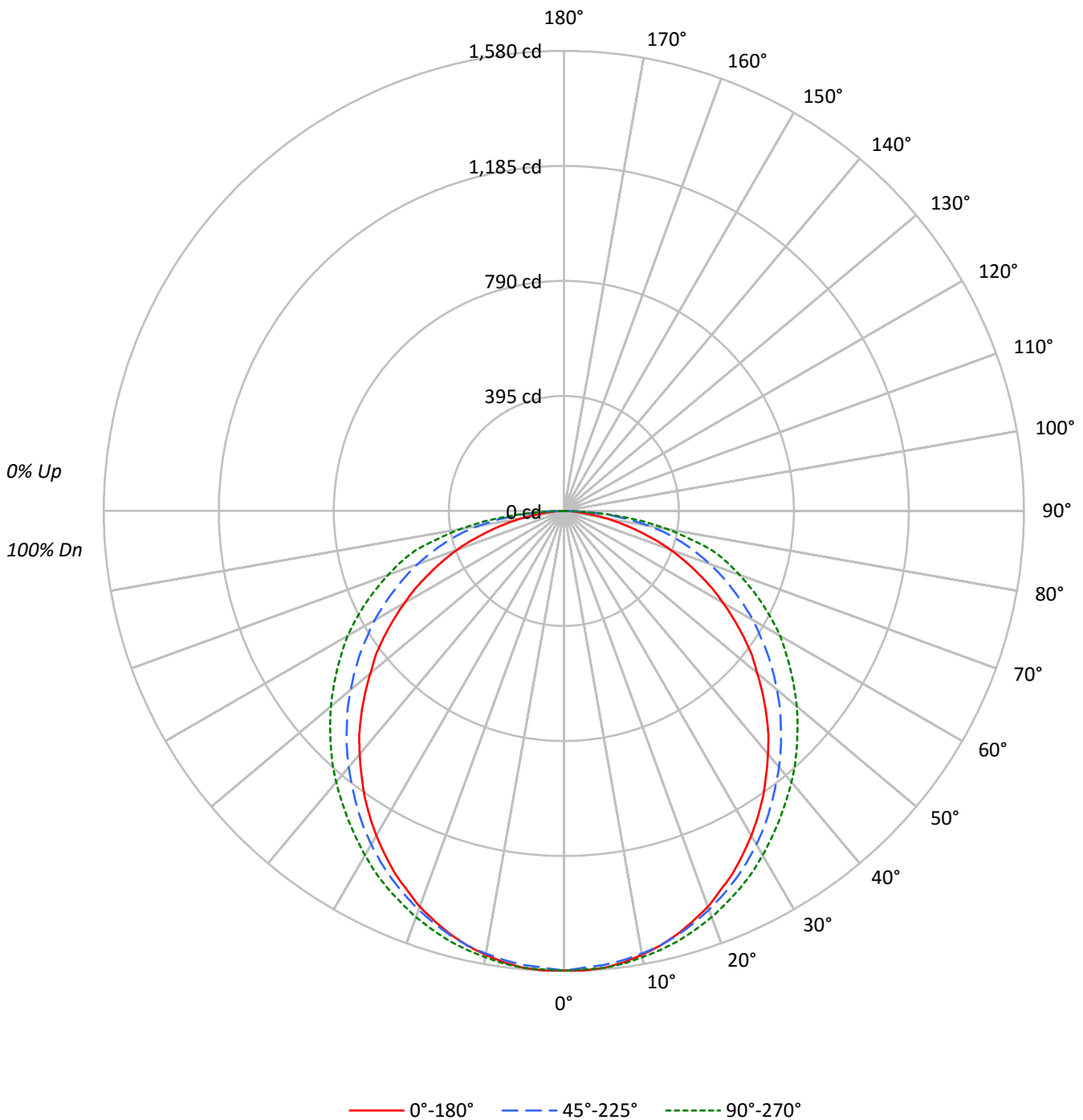
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314022

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-CA125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P314022

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-CA125-W2A-U-4000K

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°	2123	2123	2123
5°	2127	2114	2127
10°	2115	2108	2126
15°	2096	2101	2127
20°	2071	2087	2125
25°	2039	2072	2124
30°	2000	2055	2121
35°	1961	2034	2123
40°	1916	2019	2136
45°	1870	2006	2154
50°	1814	2000	2187
55°	1769	2004	2231
60°	1700	2021	2307
65°	1622	2042	2391
70°	1536	2105	2523
75°	1370	2195	2757
80°	1168	2325	2817
85°	834	2303	2695



TEST NUMBER: P314022

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-CA125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.3	3.1
10°-20°	427.0	8.9
20°-30°	645.0	13.5
30°-40°	777.4	16.2
40°-50°	816.1	17.1
50°-60°	763.5	16.0
60°-70°	630.5	13.2
70°-80°	429.6	9.0
80°-90°	146.5	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°	1221.4	25.5
0°-40°	1998.7	41.8
0°-60°	3578.3	74.8
0°-90°	4785.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4785.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1578	1578	1578	1578	1578	
5°	1575	1573	1565	1575	1575	149
15°	1505	1507	1508	1524	1527	424
25°	1373	1380	1396	1422	1430	632
35°	1194	1207	1238	1280	1292	746
45°	983	1003	1054	1111	1132	758
55°	754	784	854	924	951	673
65°	510	552	641	722	751	505
75°	264	324	422	502	530	281
85°	54	106	149	168	175	68
90°	0	0	0	0	0	



TEST NUMBER: P314022

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-CA125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1578.1	1578.1	1578.1	1578.1	1578.1
2.5°	1579.6	1578.1	1570.1	1578.1	1576.5
5°	1574.9	1573.3	1565.4	1574.9	1574.9
7.5°	1563.8	1563.8	1555.8	1566.9	1568.5
10°	1547.9	1547.9	1543.1	1555.8	1555.8
12.5°	1528.8	1528.8	1528.8	1541.5	1543.1
15°	1505.0	1506.6	1508.2	1524.1	1527.2
17.5°	1476.4	1479.6	1484.4	1503.4	1506.6
20°	1446.3	1449.5	1457.4	1479.6	1484.4
22.5°	1408.2	1416.1	1427.2	1452.6	1457.4
25°	1373.3	1379.6	1395.5	1422.5	1430.4
27.5°	1330.4	1339.9	1360.6	1389.1	1400.2
30°	1287.5	1297.1	1322.5	1355.8	1365.3
32.5°	1241.5	1255.8	1282.8	1317.7	1328.8
35°	1193.9	1206.6	1238.3	1279.6	1292.3
37.5°	1141.5	1158.9	1193.9	1238.3	1254.2
40°	1090.7	1109.7	1149.4	1197.0	1216.1
42.5°	1039.9	1058.9	1103.4	1157.3	1176.4
45°	982.7	1003.3	1054.2	1111.3	1131.9
47.5°	925.6	951.0	1006.5	1066.9	1089.1
50°	866.8	895.4	955.7	1019.2	1044.6
52.5°	814.4	841.4	904.9	973.2	997.0
55°	754.1	784.3	854.1	924.0	951.0
57.5°	692.2	725.5	800.1	876.3	903.3
60°	631.9	668.4	750.9	827.1	857.3
62.5°	573.1	609.6	695.4	774.7	804.9
65°	509.6	552.5	641.4	722.3	750.9
67.5°	449.3	495.3	589.0	668.4	696.9
70°	390.5	435.0	535.0	612.8	641.4
72.5°	327.0	377.8	477.9	558.8	589.0
75°	263.5	323.9	422.3	501.7	530.3
77.5°	204.8	266.7	365.1	430.2	444.5
80°	150.8	214.3	300.1	346.1	363.6
82.5°	96.8	160.3	228.6	262.0	276.2
85°	54.0	106.4	149.2	168.3	174.6
87.5°	22.2	46.0	60.3	68.3	68.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)