

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: P310915

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP125-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: P310915
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 4364.0 lumens
Efficiency: N/A
Efficacy: 101.7 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

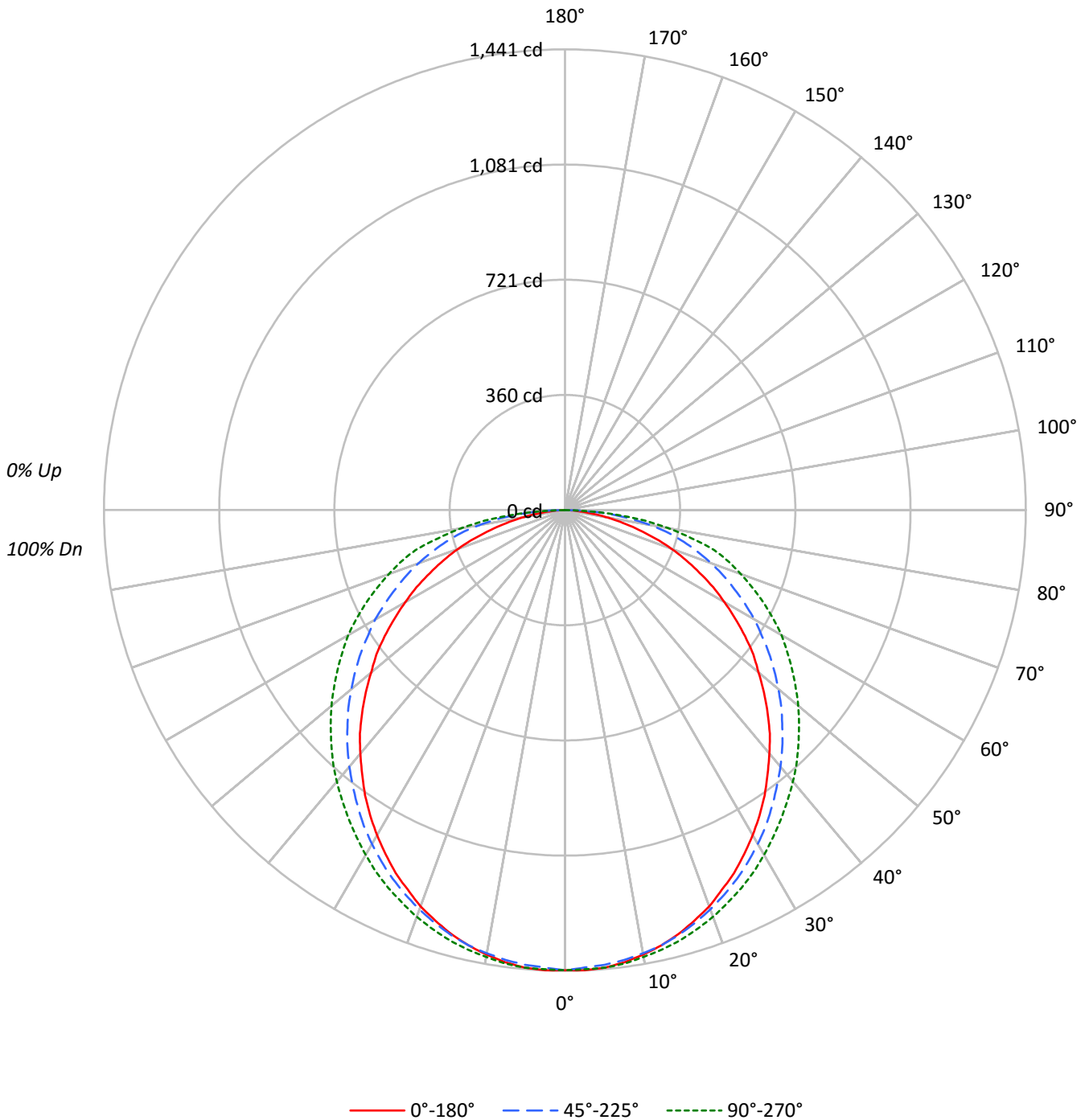
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310915

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P310915

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP125-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°	1936	1936	1936
5°	1940	1928	1940
10°	1929	1923	1939
15°	1912	1916	1940
20°	1889	1903	1938
25°	1859	1889	1937
30°	1824	1874	1935
35°	1788	1855	1936
40°	1747	1841	1948
45°	1705	1829	1964
50°	1655	1824	1994
55°	1613	1827	2035
60°	1551	1843	2104
65°	1480	1862	2181
70°	1401	1919	2301
75°	1250	2002	2514
80°	1066	2121	2569
85°	760	2101	2459



TEST NUMBER: P310915

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.2	3.1
10°-20°	389.5	8.9
20°-30°	588.2	13.5
30°-40°	709.0	16.2
40°-50°	744.3	17.1
50°-60°	696.3	16.0
60°-70°	575.1	13.2
70°-80°	391.8	9.0
80°-90°	133.6	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°	1113.9	25.5
0°-40°	1822.9	41.8
0°-60°	3263.5	74.8
0°-90°	4364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1439	1439	1439	1439	1439	
5°	1436	1435	1428	1436	1436	136
15°	1373	1374	1376	1390	1393	387
25°	1252	1258	1273	1297	1305	576
35°	1089	1100	1129	1167	1179	680
45°	896	915	961	1014	1032	691
55°	688	715	779	843	867	614
65°	465	504	585	659	685	461
75°	240	295	385	458	484	256
85°	49	97	136	154	159	62
90°	0	0	0	0	0	



TEST NUMBER: P310915

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1439.2	1439.2	1439.2	1439.2	1439.2
2.5°	1440.7	1439.2	1432.0	1439.2	1437.8
5°	1436.3	1434.9	1427.6	1436.3	1436.3
7.5°	1426.2	1426.2	1418.9	1429.1	1430.5
10°	1411.7	1411.7	1407.4	1418.9	1418.9
12.5°	1394.3	1394.3	1394.3	1405.9	1407.4
15°	1372.6	1374.1	1375.5	1390.0	1392.9
17.5°	1346.5	1349.4	1353.8	1371.2	1374.1
20°	1319.0	1321.9	1329.2	1349.4	1353.8
22.5°	1284.3	1291.5	1301.7	1324.8	1329.2
25°	1252.4	1258.2	1272.7	1297.3	1304.6
27.5°	1213.3	1222.0	1240.8	1266.9	1277.0
30°	1174.2	1182.9	1206.1	1236.5	1245.2
32.5°	1132.3	1145.3	1169.9	1201.8	1211.9
35°	1088.8	1100.4	1129.4	1167.0	1178.6
37.5°	1041.0	1057.0	1088.8	1129.4	1143.8
40°	994.7	1012.1	1048.3	1091.7	1109.1
42.5°	948.4	965.7	1006.3	1055.5	1072.9
45°	896.2	915.1	961.4	1013.5	1032.4
47.5°	844.1	867.3	918.0	973.0	993.3
50°	790.6	816.6	871.6	929.5	952.7
52.5°	742.8	767.4	825.3	887.6	909.3
55°	687.8	715.3	779.0	842.7	867.3
57.5°	631.3	661.7	729.7	799.2	823.9
60°	576.3	609.6	684.9	754.4	781.9
62.5°	522.7	556.0	634.2	706.6	734.1
65°	464.8	503.9	585.0	658.8	684.9
67.5°	409.8	451.7	537.2	609.6	635.6
70°	356.2	396.7	487.9	558.9	585.0
72.5°	298.3	344.6	435.8	509.7	537.2
75°	240.4	295.4	385.1	457.5	483.6
77.5°	186.8	243.2	333.0	392.4	405.4
80°	137.6	195.5	273.7	315.6	331.6
82.5°	88.3	146.2	208.5	238.9	251.9
85°	49.2	97.0	136.1	153.5	159.3
87.5°	20.3	42.0	55.0	62.3	62.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)