

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: P311594

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CP125-W2A-U-5500K**

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: P311594
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: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 5500K 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: 4882.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

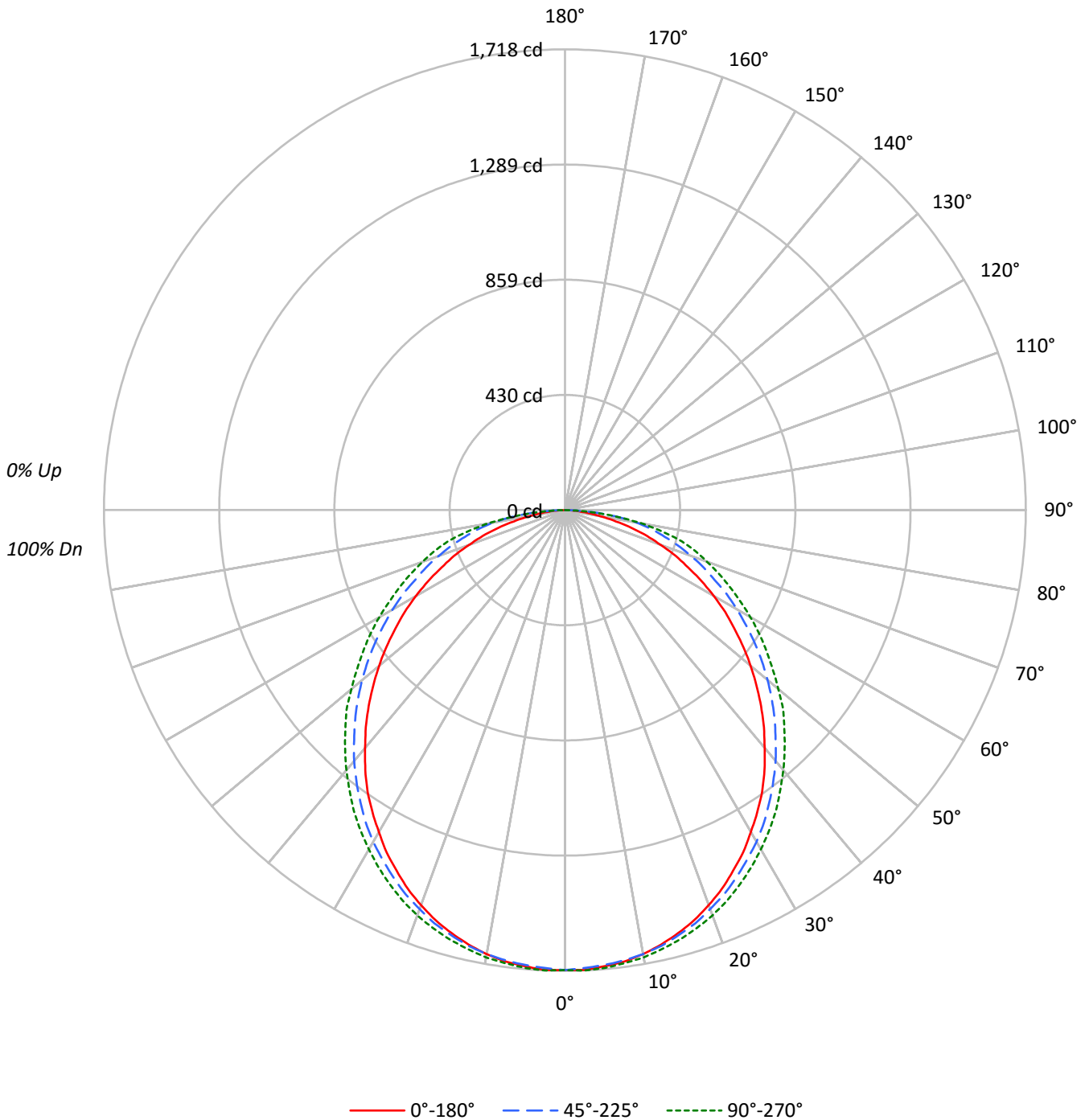
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311594

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P311594

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-5500K

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°	2308	2308	2308
5°	2306	2300	2314
10°	2297	2297	2314
15°	2275	2285	2309
20°	2245	2267	2303
25°	2203	2245	2288
30°	2154	2219	2270
35°	2106	2183	2252
40°	2035	2146	2225
45°	1968	2104	2201
50°	1892	2064	2175
55°	1808	2026	2153
60°	1723	1995	2149
65°	1614	1960	2162
70°	1495	1971	2221
75°	1338	2007	2346
80°	1082	2127	2295
85°	814	1868	1820



TEST NUMBER: P311594

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.4	3.3
10°-20°	463.9	9.5
20°-30°	697.4	14.3
30°-40°	830.7	17.0
40°-50°	850.2	17.4
50°-60°	765.4	15.7
60°-70°	601.1	12.3
70°-80°	390.1	8.0
80°-90°	120.7	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°	1323.7	27.1
0°-40°	2154.4	44.1
0°-60°	3770.1	77.2
0°-90°	4882.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4882.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1715	1715	1715	1715	1715	
5°	1707	1710	1703	1712	1714	162
15°	1633	1638	1641	1655	1658	460
25°	1484	1496	1512	1537	1541	684
35°	1282	1298	1329	1362	1371	800
45°	1034	1059	1106	1148	1157	797
55°	771	805	864	909	918	691
65°	507	546	616	667	679	505
75°	257	307	386	439	451	272
85°	53	98	121	118	118	64
90°	0	0	0	0	0	



TEST NUMBER: P311594

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1715.1	1715.1	1715.1	1715.1	1715.1
2.5°	1716.6	1716.6	1708.9	1716.6	1718.2
5°	1707.3	1710.4	1702.7	1712.0	1713.5
7.5°	1698.0	1698.0	1693.4	1702.7	1704.2
10°	1681.0	1682.5	1681.0	1691.8	1693.4
12.5°	1659.3	1662.4	1663.9	1674.8	1676.3
15°	1632.9	1637.5	1640.6	1654.6	1657.7
17.5°	1603.4	1608.1	1615.8	1631.3	1634.4
20°	1567.8	1574.0	1583.3	1603.4	1608.1
22.5°	1529.0	1535.2	1550.7	1569.3	1577.1
25°	1484.0	1496.4	1511.9	1536.7	1541.4
27.5°	1439.1	1449.9	1470.1	1496.4	1502.6
30°	1386.3	1403.4	1428.2	1454.6	1460.8
32.5°	1335.2	1352.2	1381.7	1409.6	1417.3
35°	1282.4	1297.9	1329.0	1361.5	1370.8
37.5°	1222.0	1242.1	1276.2	1308.8	1318.1
40°	1158.4	1183.2	1222.0	1256.1	1266.9
42.5°	1097.9	1124.3	1163.0	1200.2	1212.7
45°	1034.3	1059.1	1105.7	1147.5	1156.8
47.5°	969.2	997.1	1046.7	1088.6	1104.1
50°	904.1	933.5	986.2	1029.7	1039.0
52.5°	838.9	869.9	925.8	972.3	976.9
55°	770.7	804.8	863.7	908.7	918.0
57.5°	708.7	738.1	801.7	848.2	859.1
60°	640.4	673.0	741.2	784.7	798.6
62.5°	575.3	609.4	680.8	724.2	736.6
65°	507.1	545.8	615.6	666.8	679.2
67.5°	448.2	485.4	559.8	609.4	621.8
70°	379.9	421.8	500.9	552.1	564.5
72.5°	321.0	364.4	443.5	493.1	511.7
75°	257.4	307.0	386.1	438.8	451.3
77.5°	195.4	252.8	333.4	373.7	373.7
80°	139.6	200.0	274.5	293.1	296.2
82.5°	91.5	150.4	203.1	201.6	201.6
85°	52.7	97.7	121.0	117.9	117.9
87.5°	20.2	40.3	43.4	43.4	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)