

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: P311050

Luminaire Tested: **24FCZ2-65HE-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: P311050
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: 24FCZ2-65HE-UNV-L82765-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 5703.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

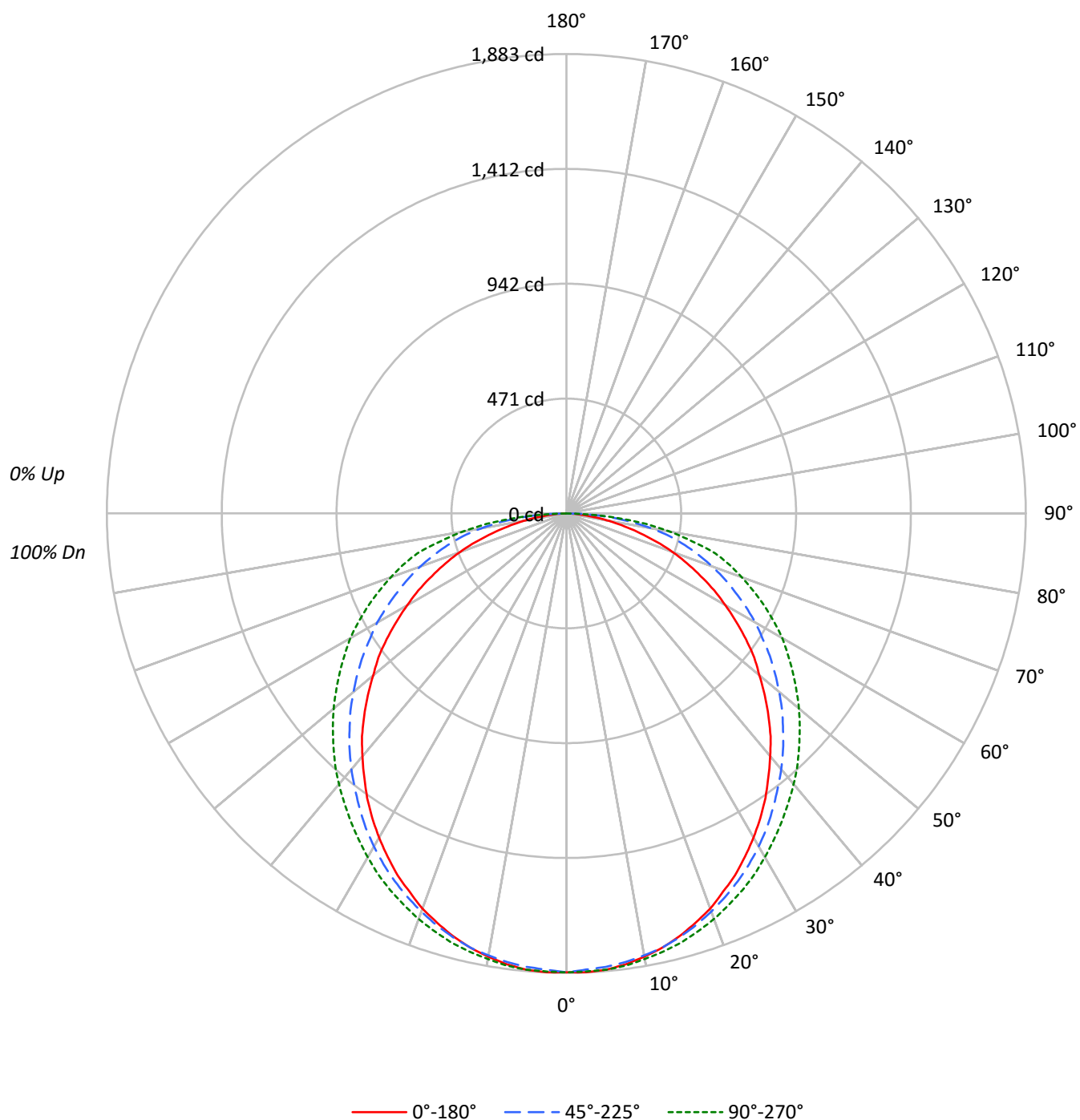
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2531	2531	2531
5°	2535	2520	2535
10°	2520	2513	2533
15°	2499	2504	2536
20°	2468	2487	2533
25°	2430	2469	2531
30°	2384	2449	2528
35°	2337	2424	2530
40°	2283	2406	2546
45°	2229	2391	2567
50°	2162	2384	2606
55°	2108	2388	2659
60°	2027	2408	2750
65°	1934	2434	2849
70°	1831	2509	3007
75°	1633	2616	3285
80°	1393	2771	3357
85°	993	2746	3213



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.0	3.1
10°-20°	509.0	8.9
20°-30°	768.7	13.5
30°-40°	926.5	16.2
40°-50°	972.7	17.1
50°-60°	910.0	16.0
60°-70°	751.5	13.2
70°-80°	512.1	9.0
80°-90°	174.6	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°	1455.7	25.5
0°-40°	2382.2	41.8
0°-60°	4264.8	74.8
0°-90°	5703.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5703.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1881	1881	1881	1881	1881	
5°	1877	1875	1866	1877	1877	178
15°	1794	1796	1798	1816	1820	506
25°	1637	1644	1663	1695	1705	753
35°	1423	1438	1476	1525	1540	889
45°	1171	1196	1256	1324	1349	903
55°	899	935	1018	1101	1133	802
65°	607	658	764	861	895	602
75°	314	386	503	598	632	335
85°	64	127	178	201	208	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1880.8	1880.8	1880.8	1880.8	1880.8
2.5°	1882.7	1880.8	1871.3	1880.8	1878.9
5°	1877.0	1875.1	1865.7	1877.0	1877.0
7.5°	1863.8	1863.8	1854.3	1867.6	1869.4
10°	1844.8	1844.8	1839.2	1854.3	1854.3
12.5°	1822.1	1822.1	1822.1	1837.3	1839.2
15°	1793.8	1795.7	1797.5	1816.5	1820.3
17.5°	1759.7	1763.5	1769.2	1791.9	1795.7
20°	1723.8	1727.5	1737.0	1763.5	1769.2
22.5°	1678.3	1687.8	1701.0	1731.3	1737.0
25°	1636.7	1644.3	1663.2	1695.4	1704.8
27.5°	1585.6	1597.0	1621.6	1655.6	1668.9
30°	1534.5	1545.9	1576.2	1615.9	1627.3
32.5°	1479.7	1496.7	1528.9	1570.5	1583.7
35°	1422.9	1438.0	1475.9	1525.1	1540.2
37.5°	1360.5	1381.3	1422.9	1475.9	1494.8
40°	1299.9	1322.6	1369.9	1426.7	1449.4
42.5°	1239.4	1262.1	1315.0	1379.4	1402.1
45°	1171.2	1195.8	1256.4	1324.5	1349.1
47.5°	1103.1	1133.4	1199.6	1271.5	1298.0
50°	1033.1	1067.2	1139.1	1214.8	1245.0
52.5°	970.7	1002.8	1078.5	1159.9	1188.3
55°	898.8	934.7	1018.0	1101.2	1133.4
57.5°	825.0	864.7	953.6	1044.5	1076.6
60°	753.1	796.6	895.0	985.8	1021.8
62.5°	683.1	726.6	828.8	923.4	959.3
65°	607.4	658.5	764.4	860.9	895.0
67.5°	535.5	590.4	702.0	796.6	830.7
70°	465.5	518.4	637.7	730.4	764.4
72.5°	389.8	450.3	569.5	666.0	702.0
75°	314.1	386.0	503.3	597.9	632.0
77.5°	244.1	317.9	435.2	512.8	529.8
80°	179.8	255.4	357.6	412.5	433.3
82.5°	115.4	191.1	272.5	312.2	329.2
85°	64.3	126.8	177.9	200.6	208.1
87.5°	26.5	54.9	71.9	81.4	81.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)