

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: P311049

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP125-W2A-U-3000K**

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: P311049  
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-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 3000K 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**

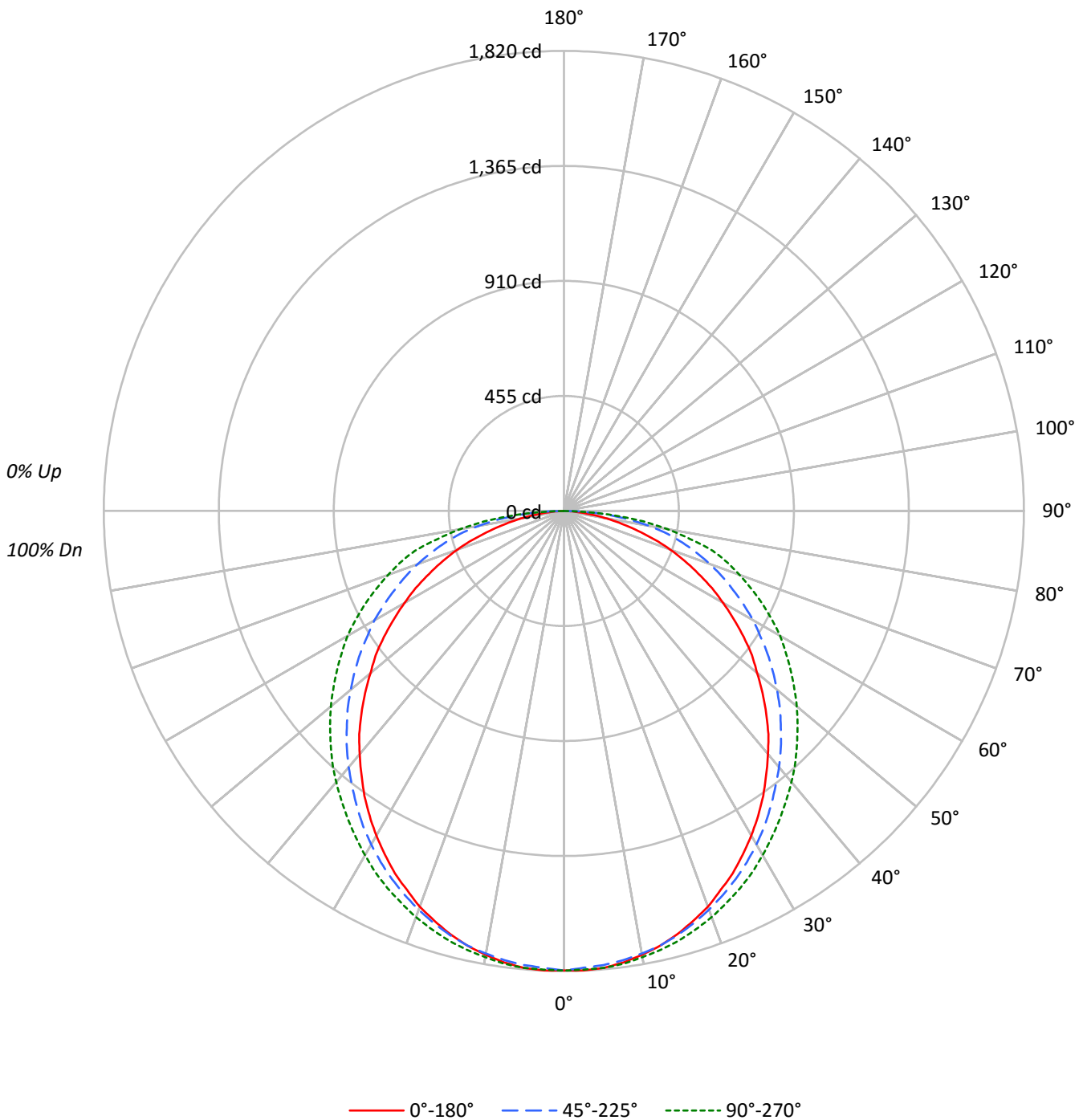
Lumens per Lamp: N/A  
Luminaire Lumens: 5512.0 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 52.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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				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°	2446	2446	2446
5°	2450	2435	2450
10°	2436	2429	2449
15°	2415	2420	2451
20°	2385	2404	2448
25°	2348	2386	2446
30°	2304	2367	2444
35°	2259	2343	2445
40°	2207	2325	2460
45°	2154	2311	2481
50°	2090	2304	2519
55°	2038	2308	2570
60°	1959	2328	2657
65°	1869	2352	2754
70°	1770	2424	2906
75°	1578	2529	3175
80°	1346	2678	3245
85°	960	2654	3106



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.0	3.1
10°-20°	491.9	8.9
20°-30°	743.0	13.5
30°-40°	895.5	16.2
40°-50°	940.1	17.1
50°-60°	879.5	16.0
60°-70°	726.3	13.2
70°-80°	494.9	9.0
80°-90°	168.8	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°	1406.9	25.5
0°-40°	2302.4	41.8
0°-60°	4122.0	74.8
0°-90°	5512.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5512.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1818	1818	1818	1818	1818	
5°	1814	1812	1803	1814	1814	172
15°	1734	1736	1737	1756	1759	489
25°	1582	1589	1608	1639	1648	728
35°	1375	1390	1426	1474	1489	859
45°	1132	1156	1214	1280	1304	873
55°	869	903	984	1064	1095	775
65°	587	636	739	832	865	582
75°	304	373	486	578	611	324
85°	62	122	172	194	201	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1817.8	1817.8	1817.8	1817.8	1817.8
2.5°	1819.6	1817.8	1808.7	1817.8	1816.0
5°	1814.2	1812.3	1803.2	1814.2	1814.2
7.5°	1801.4	1801.4	1792.2	1805.0	1806.8
10°	1783.1	1783.1	1777.6	1792.2	1792.2
12.5°	1761.1	1761.1	1761.1	1775.7	1777.6
15°	1733.7	1735.5	1737.3	1755.6	1759.3
17.5°	1700.8	1704.4	1709.9	1731.9	1735.5
20°	1666.0	1669.7	1678.8	1704.4	1709.9
22.5°	1622.1	1631.3	1644.1	1673.3	1678.8
25°	1581.9	1589.2	1607.5	1638.6	1647.7
27.5°	1532.5	1543.5	1567.3	1600.2	1613.0
30°	1483.1	1494.1	1523.4	1561.8	1572.8
32.5°	1430.1	1446.6	1477.7	1517.9	1530.7
35°	1375.2	1389.9	1426.5	1474.0	1488.6
37.5°	1314.9	1335.0	1375.2	1426.5	1444.7
40°	1256.4	1278.3	1324.0	1378.9	1400.8
42.5°	1197.9	1219.8	1271.0	1333.2	1355.1
45°	1132.0	1155.8	1214.3	1280.1	1303.9
47.5°	1066.2	1095.4	1159.4	1228.9	1254.5
50°	998.5	1031.4	1100.9	1174.1	1203.3
52.5°	938.2	969.3	1042.4	1121.0	1148.5
55°	868.7	903.4	983.9	1064.4	1095.4
57.5°	797.3	835.8	921.7	1009.5	1040.6
60°	727.9	769.9	865.0	952.8	987.5
62.5°	660.2	702.3	801.0	892.4	927.2
65°	587.0	636.4	738.8	832.1	865.0
67.5°	517.5	570.6	678.5	769.9	802.8
70°	449.9	501.1	616.3	705.9	738.8
72.5°	376.7	435.3	550.5	643.7	678.5
75°	303.6	373.1	486.5	577.9	610.8
77.5°	235.9	307.2	420.6	495.6	512.1
80°	173.7	246.9	345.6	398.7	418.8
82.5°	111.6	184.7	263.3	301.7	318.2
85°	62.2	122.5	171.9	193.9	201.2
87.5°	25.6	53.0	69.5	78.6	78.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)