

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: P311047

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CA125-W2A-U-6500K**

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: P311047  
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-CA125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 6500K 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**

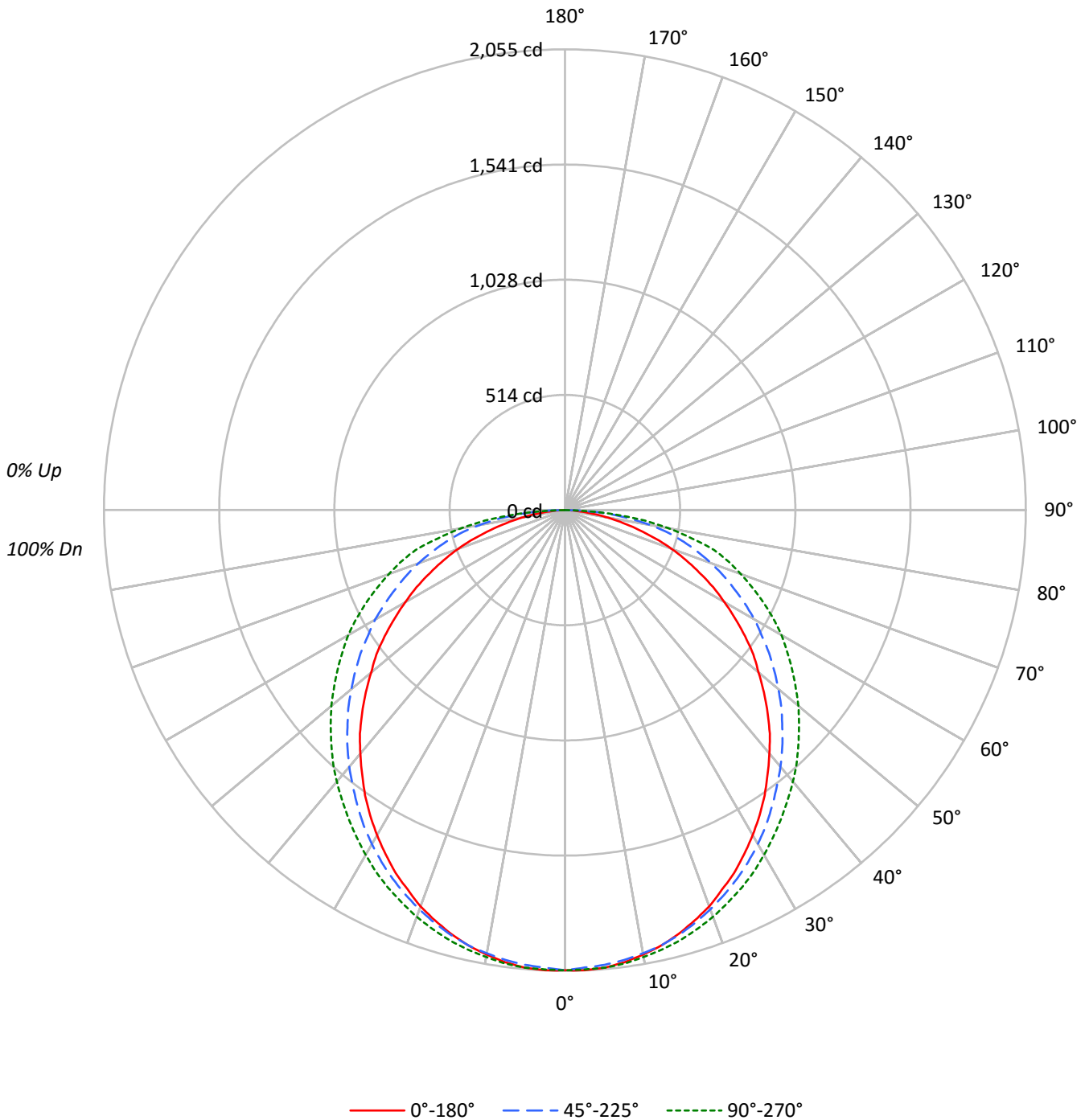
Lumens per Lamp: N/A  
Luminaire Lumens: 6224.0 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 54.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2762	2762	2762
5°	2767	2750	2767
10°	2751	2742	2765
15°	2727	2733	2767
20°	2694	2714	2765
25°	2652	2695	2762
30°	2602	2673	2759
35°	2551	2646	2761
40°	2492	2626	2778
45°	2432	2609	2802
50°	2360	2602	2844
55°	2301	2606	2902
60°	2212	2629	3001
65°	2110	2656	3110
70°	1998	2738	3282
75°	1782	2856	3585
80°	1520	3024	3664
85°	1084	2996	3507



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.3	3.1
10°-20°	555.5	8.9
20°-30°	839.0	13.5
30°-40°	1011.1	16.2
40°-50°	1061.5	17.1
50°-60°	993.1	16.0
60°-70°	820.1	13.2
70°-80°	558.9	9.0
80°-90°	190.6	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°	1588.7	25.5
0°-40°	2599.8	41.8
0°-60°	4654.4	74.8
0°-90°	6224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2053	2053	2053	2053	2053	
5°	2048	2046	2036	2048	2048	194
15°	1958	1960	1962	1982	1986	552
25°	1786	1794	1815	1850	1861	822
35°	1553	1569	1611	1664	1681	970
45°	1278	1305	1371	1446	1472	986
55°	981	1020	1111	1202	1237	876
65°	663	719	834	940	977	658
75°	343	421	549	652	690	366
85°	70	138	194	219	227	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2052.6	2052.6	2052.6	2052.6	2052.6
2.5°	2054.7	2052.6	2042.3	2052.6	2050.6
5°	2048.5	2046.4	2036.1	2048.5	2048.5
7.5°	2034.0	2034.0	2023.7	2038.2	2040.2
10°	2013.4	2013.4	2007.2	2023.7	2023.7
12.5°	1988.6	1988.6	1988.6	2005.1	2007.2
15°	1957.6	1959.7	1961.8	1982.4	1986.5
17.5°	1920.5	1924.6	1930.8	1955.6	1959.7
20°	1881.2	1885.4	1895.7	1924.6	1930.8
22.5°	1831.7	1842.0	1856.4	1889.5	1895.7
25°	1786.2	1794.5	1815.1	1850.2	1860.6
27.5°	1730.5	1742.9	1769.7	1806.9	1821.3
30°	1674.7	1687.1	1720.2	1763.5	1775.9
32.5°	1614.8	1633.4	1668.5	1714.0	1728.4
35°	1552.9	1569.4	1610.7	1664.4	1680.9
37.5°	1484.7	1507.5	1552.9	1610.7	1631.4
40°	1418.7	1443.4	1495.1	1557.0	1581.8
42.5°	1352.6	1377.4	1435.2	1505.4	1530.2
45°	1278.2	1305.1	1371.2	1445.5	1472.4
47.5°	1203.9	1236.9	1309.2	1387.7	1416.6
50°	1127.5	1164.7	1243.1	1325.7	1358.8
52.5°	1059.4	1094.5	1177.1	1265.9	1296.8
55°	980.9	1020.1	1111.0	1201.8	1236.9
57.5°	900.3	943.7	1040.8	1139.9	1175.0
60°	821.9	869.4	976.8	1075.9	1115.1
62.5°	745.5	793.0	904.5	1007.7	1047.0
65°	662.9	718.6	834.3	939.6	976.8
67.5°	584.4	644.3	766.1	869.4	906.5
70°	508.0	565.8	695.9	797.1	834.3
72.5°	425.4	491.5	621.6	726.9	766.1
75°	342.8	421.3	549.3	652.5	689.7
77.5°	266.4	346.9	475.0	559.6	578.2
80°	196.2	278.8	390.3	450.2	472.9
82.5°	126.0	208.6	297.4	340.7	359.3
85°	70.2	138.4	194.1	218.9	227.2
87.5°	28.9	59.9	78.5	88.8	88.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)