

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: P311037

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CA08-W2A-U-5700K**

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: P311037  
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-CA08-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5700K 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**

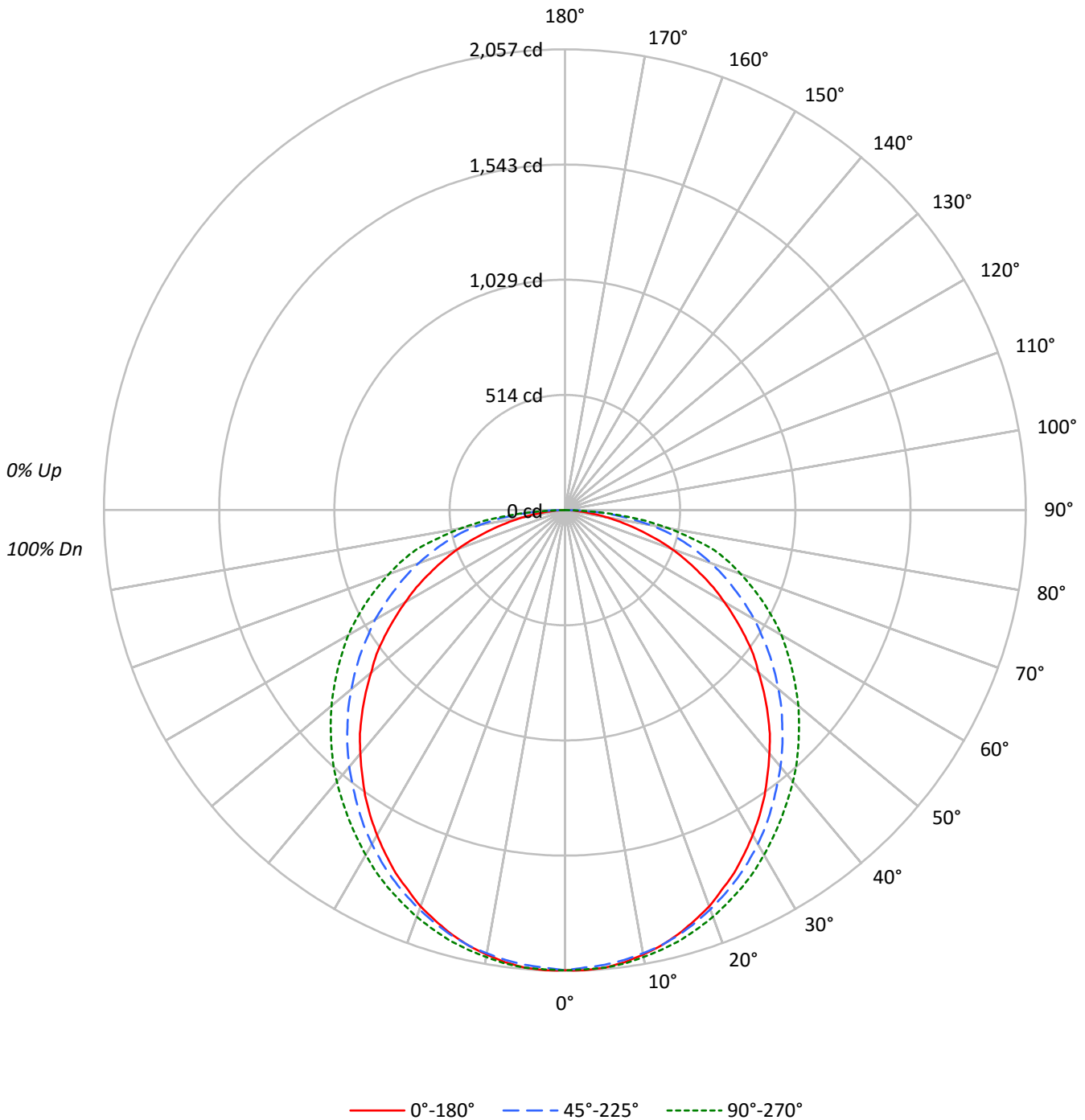
Lumens per Lamp: N/A  
Luminaire Lumens: 6230.0 lumens  
Efficiency: N/A  
Efficacy: 115.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 54.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2764	2764	2764
5°	2769	2753	2769
10°	2753	2745	2768
15°	2729	2735	2770
20°	2696	2717	2767
25°	2654	2697	2765
30°	2604	2675	2762
35°	2553	2648	2764
40°	2494	2628	2781
45°	2435	2612	2804
50°	2362	2605	2847
55°	2303	2609	2904
60°	2214	2631	3004
65°	2112	2659	3113
70°	2000	2740	3285
75°	1784	2858	3589
80°	1522	3027	3667
85°	1085	3000	3511



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.4	3.1
10°-20°	556.0	8.9
20°-30°	839.8	13.5
30°-40°	1012.1	16.2
40°-50°	1062.5	17.1
50°-60°	994.1	16.0
60°-70°	820.9	13.2
70°-80°	559.4	9.0
80°-90°	190.8	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°	1590.2	25.5
0°-40°	2602.3	41.8
0°-60°	4658.9	74.8
0°-90°	6230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6230.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2055	2055	2055	2055	2055	
5°	2050	2048	2038	2050	2050	195
15°	1960	1962	1964	1984	1988	552
25°	1788	1796	1817	1852	1862	823
35°	1554	1571	1612	1666	1682	971
45°	1280	1306	1372	1447	1474	987
55°	982	1021	1112	1203	1238	876
65°	664	719	835	940	978	658
75°	343	422	550	653	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°	2054.6	2054.6	2054.6	2054.6	2054.6
2.5°	2056.7	2054.6	2044.3	2054.6	2052.5
5°	2050.5	2048.4	2038.1	2050.5	2050.5
7.5°	2036.0	2036.0	2025.7	2040.1	2042.2
10°	2015.3	2015.3	2009.1	2025.7	2025.7
12.5°	1990.5	1990.5	1990.5	2007.1	2009.1
15°	1959.5	1961.6	1963.7	1984.3	1988.5
17.5°	1922.3	1926.4	1932.6	1957.5	1961.6
20°	1883.0	1887.2	1897.5	1926.4	1932.6
22.5°	1833.4	1843.8	1858.2	1891.3	1897.5
25°	1788.0	1796.2	1816.9	1852.0	1862.4
27.5°	1732.1	1744.5	1771.4	1808.6	1823.1
30°	1676.3	1688.7	1721.8	1765.2	1777.6
32.5°	1616.4	1635.0	1670.1	1715.6	1730.1
35°	1554.4	1570.9	1612.3	1666.0	1682.5
37.5°	1486.2	1508.9	1554.4	1612.3	1632.9
40°	1420.0	1444.8	1496.5	1558.5	1583.3
42.5°	1353.9	1378.7	1436.6	1506.8	1531.6
45°	1279.5	1306.3	1372.5	1446.9	1473.8
47.5°	1205.1	1238.1	1310.5	1389.0	1418.0
50°	1128.6	1165.8	1244.3	1327.0	1360.1
52.5°	1060.4	1095.5	1178.2	1267.1	1298.1
55°	981.8	1021.1	1112.0	1203.0	1238.1
57.5°	901.2	944.6	1041.8	1141.0	1176.1
60°	822.7	870.2	977.7	1076.9	1116.2
62.5°	746.2	793.7	905.3	1008.7	1048.0
65°	663.5	719.3	835.1	940.5	977.7
67.5°	585.0	644.9	766.9	870.2	907.4
70°	508.5	566.4	696.6	797.9	835.1
72.5°	425.8	491.9	622.2	727.6	766.9
75°	343.1	421.7	549.8	653.2	690.4
77.5°	266.6	347.3	475.4	560.2	578.8
80°	196.4	279.0	390.7	450.6	473.3
82.5°	126.1	208.8	297.6	341.1	359.7
85°	70.3	138.5	194.3	219.1	227.4
87.5°	28.9	59.9	78.5	88.9	88.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)