

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: P314160

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP250-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: P314160  
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: 24FCZ2-75HE-UNV-L83050-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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**

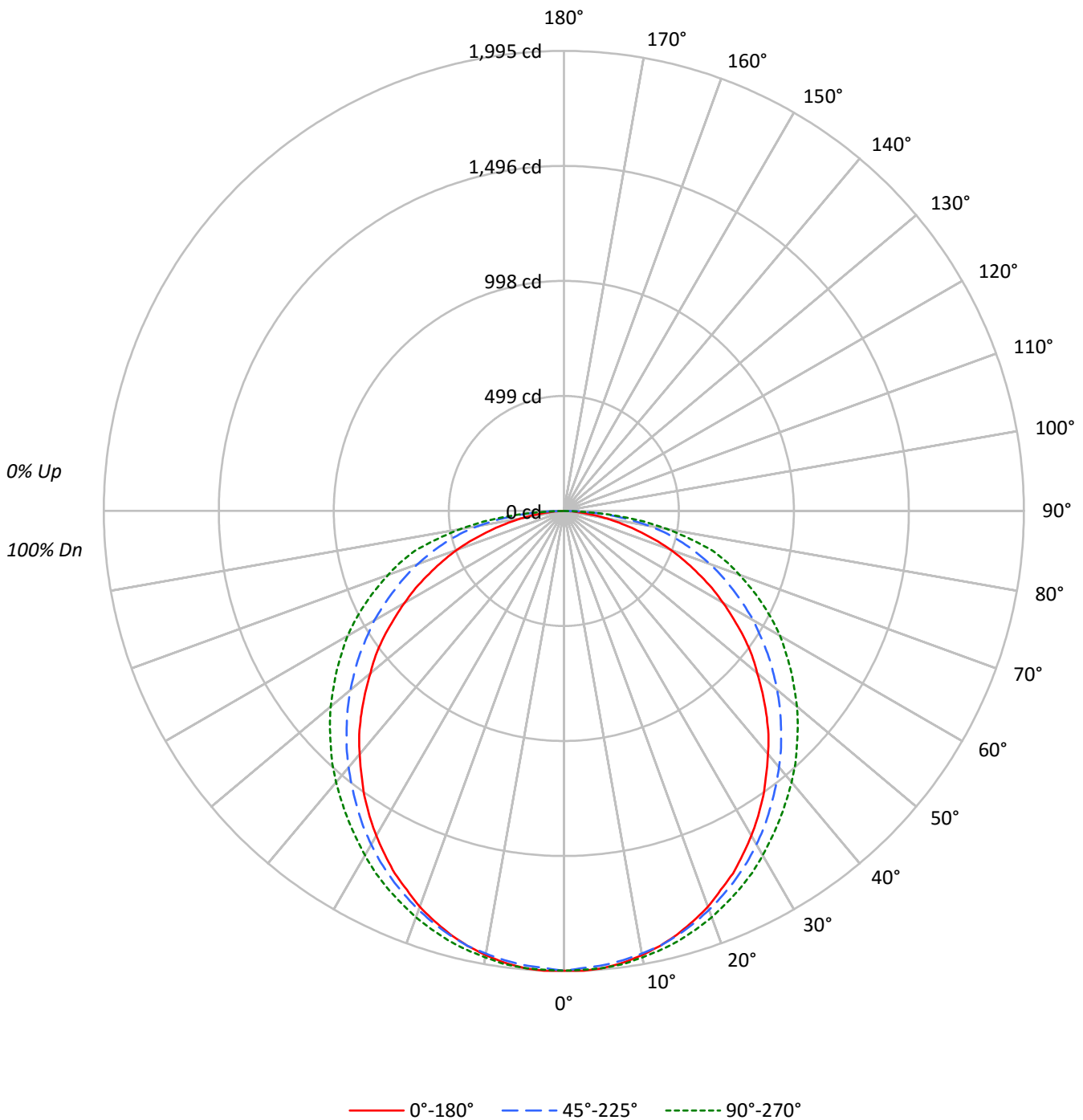
Lumens per Lamp: N/A  
Luminaire Lumens: 6044.0 lumens  
Efficiency: N/A  
Efficacy: 96.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2682	2682	2682
5°	2687	2670	2687
10°	2671	2663	2685
15°	2648	2654	2687
20°	2616	2636	2685
25°	2575	2617	2682
30°	2527	2595	2679
35°	2477	2569	2681
40°	2420	2550	2698
45°	2362	2534	2721
50°	2292	2527	2762
55°	2234	2531	2818
60°	2148	2552	2914
65°	2049	2579	3020
70°	1941	2659	3187
75°	1731	2773	3482
80°	1476	2937	3558
85°	1053	2910	3406



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	188.6	3.1
10°-20°	539.4	8.9
20°-30°	814.7	13.5
30°-40°	981.9	16.2
40°-50°	1030.8	17.1
50°-60°	964.4	16.0
60°-70°	796.4	13.2
70°-80°	542.7	9.0
80°-90°	185.1	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°	1542.7	25.5
0°-40°	2524.6	41.8
0°-60°	4519.8	74.8
0°-90°	6044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6044.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1993	1993	1993	1993	1993	
5°	1989	1987	1977	1989	1989	189
15°	1901	1903	1905	1925	1929	536
25°	1735	1743	1763	1797	1807	798
35°	1508	1524	1564	1616	1632	942
45°	1241	1267	1332	1404	1430	957
55°	952	991	1079	1167	1201	850
65°	644	698	810	912	948	638
75°	333	409	533	634	670	355
85°	68	134	188	213	221	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1993.3	1993.3	1993.3	1993.3	1993.3
2.5°	1995.3	1993.3	1983.2	1993.3	1991.3
5°	1989.2	1987.2	1977.2	1989.2	1989.2
7.5°	1975.2	1975.2	1965.2	1979.2	1981.2
10°	1955.2	1955.2	1949.1	1965.2	1965.2
12.5°	1931.1	1931.1	1931.1	1947.1	1949.1
15°	1901.0	1903.0	1905.0	1925.1	1929.1
17.5°	1864.9	1868.9	1874.9	1899.0	1903.0
20°	1826.8	1830.8	1840.9	1868.9	1874.9
22.5°	1778.7	1788.7	1802.8	1834.8	1840.9
25°	1734.6	1742.6	1762.7	1796.7	1806.8
27.5°	1680.4	1692.5	1718.5	1754.6	1768.7
30°	1626.3	1638.3	1670.4	1712.5	1724.5
32.5°	1568.1	1586.2	1620.3	1664.4	1678.4
35°	1508.0	1524.0	1564.1	1616.3	1632.3
37.5°	1441.8	1463.9	1508.0	1564.1	1584.2
40°	1377.6	1401.7	1451.8	1512.0	1536.1
42.5°	1313.5	1337.5	1393.7	1461.9	1485.9
45°	1241.3	1267.3	1331.5	1403.7	1429.8
47.5°	1169.1	1201.2	1271.4	1347.6	1375.6
50°	1094.9	1131.0	1207.2	1287.4	1319.5
52.5°	1028.7	1062.8	1143.0	1229.2	1259.3
55°	952.5	990.6	1078.8	1167.1	1201.2
57.5°	874.3	916.4	1010.7	1106.9	1141.0
60°	798.1	844.2	948.5	1044.8	1082.9
62.5°	723.9	770.0	878.3	978.6	1016.7
65°	643.7	697.8	810.1	912.4	948.5
67.5°	567.5	625.7	744.0	844.2	880.3
70°	493.3	549.4	675.8	774.0	810.1
72.5°	413.1	477.3	603.6	705.9	744.0
75°	332.9	409.1	533.4	633.7	669.8
77.5°	258.7	336.9	461.2	543.4	561.5
80°	190.5	270.7	379.0	437.2	459.2
82.5°	122.3	202.5	288.8	330.9	348.9
85°	68.2	134.4	188.5	212.6	220.6
87.5°	28.1	58.2	76.2	86.2	86.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)