

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: P314125

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-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: P314125  
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: 24FCZ2-70HE-UNV-L83050-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**

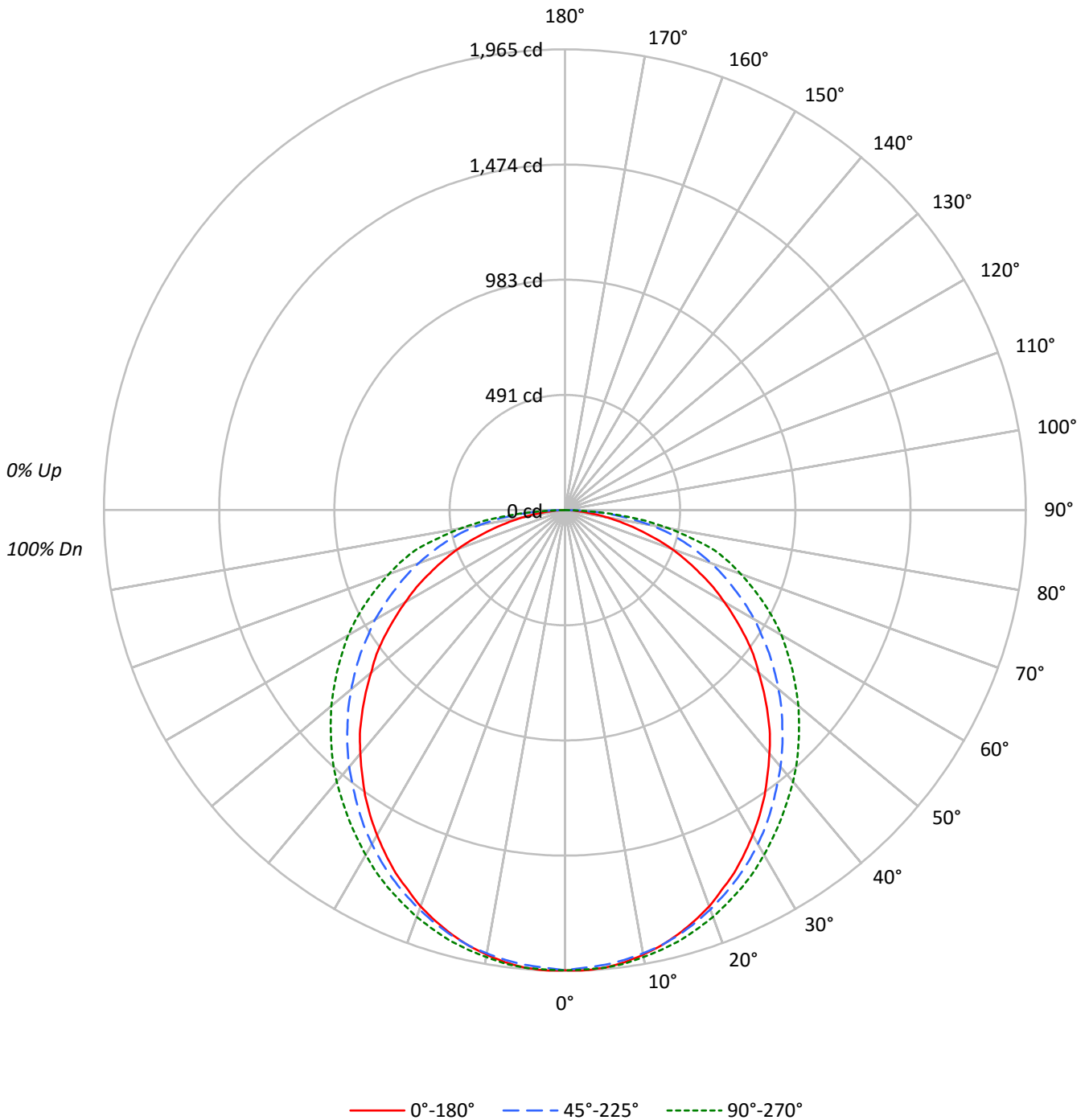
Lumens per Lamp: N/A  
Luminaire Lumens: 5952.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2641	2641	2641
5°	2646	2630	2646
10°	2631	2623	2644
15°	2608	2613	2646
20°	2576	2596	2644
25°	2536	2577	2642
30°	2488	2556	2639
35°	2439	2530	2640
40°	2383	2511	2657
45°	2326	2495	2679
50°	2257	2488	2720
55°	2200	2492	2775
60°	2115	2514	2870
65°	2018	2540	2974
70°	1911	2618	3139
75°	1704	2731	3429
80°	1454	2892	3504
85°	1036	2865	3353



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.8	3.1
10°-20°	531.2	8.9
20°-30°	802.3	13.5
30°-40°	967.0	16.2
40°-50°	1015.1	17.1
50°-60°	949.7	16.0
60°-70°	784.3	13.2
70°-80°	534.4	9.0
80°-90°	182.3	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°	1519.2	25.5
0°-40°	2486.2	41.8
0°-60°	4451.0	74.8
0°-90°	5952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5952.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1963	1963	1963	1963	1963	
5°	1959	1957	1947	1959	1959	186
15°	1872	1874	1876	1896	1900	528
25°	1708	1716	1736	1769	1779	786
35°	1485	1501	1540	1592	1608	928
45°	1222	1248	1311	1382	1408	943
55°	938	976	1062	1149	1183	837
65°	634	687	798	898	934	629
75°	328	403	525	624	660	350
85°	67	132	186	209	217	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1962.9	1962.9	1962.9	1962.9	1962.9
2.5°	1964.9	1962.9	1953.0	1962.9	1960.9
5°	1959.0	1957.0	1947.1	1959.0	1959.0
7.5°	1945.1	1945.1	1935.3	1949.1	1951.1
10°	1925.4	1925.4	1919.5	1935.3	1935.3
12.5°	1901.7	1901.7	1901.7	1917.5	1919.5
15°	1872.1	1874.1	1876.0	1895.8	1899.7
17.5°	1836.5	1840.5	1846.4	1870.1	1874.1
20°	1799.0	1803.0	1812.8	1840.5	1846.4
22.5°	1751.6	1761.5	1775.3	1806.9	1812.8
25°	1708.2	1716.1	1735.8	1769.4	1779.3
27.5°	1654.9	1666.7	1692.4	1727.9	1741.7
30°	1601.5	1613.4	1645.0	1686.5	1698.3
32.5°	1544.3	1562.0	1595.6	1639.1	1652.9
35°	1485.0	1500.8	1540.3	1591.7	1607.5
37.5°	1419.9	1441.6	1485.0	1540.3	1560.1
40°	1356.7	1380.4	1429.7	1489.0	1512.7
42.5°	1293.5	1317.2	1372.5	1439.6	1463.3
45°	1222.4	1248.1	1311.2	1382.3	1408.0
47.5°	1151.3	1182.9	1252.0	1327.0	1354.7
50°	1078.2	1113.8	1188.8	1267.8	1299.4
52.5°	1013.1	1046.6	1125.6	1210.5	1240.2
55°	938.0	975.5	1062.4	1149.3	1182.9
57.5°	861.0	902.5	995.3	1090.1	1123.6
60°	786.0	831.4	934.1	1028.9	1066.4
62.5°	712.9	758.3	864.9	963.7	1001.2
65°	633.9	687.2	797.8	898.5	934.1
67.5°	558.9	616.1	732.6	831.4	866.9
70°	485.8	541.1	665.5	762.3	797.8
72.5°	406.8	470.0	594.4	695.1	732.6
75°	327.8	402.9	525.3	624.0	659.6
77.5°	254.7	331.8	454.2	535.2	552.9
80°	187.6	266.6	373.2	430.5	452.2
82.5°	120.5	199.5	284.4	325.8	343.6
85°	67.1	132.3	185.6	209.3	217.2
87.5°	27.6	57.3	75.0	84.9	84.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)