

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: P311623

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CA08-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: P311623  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-55HE-UNV-L82765-S-CA08-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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**

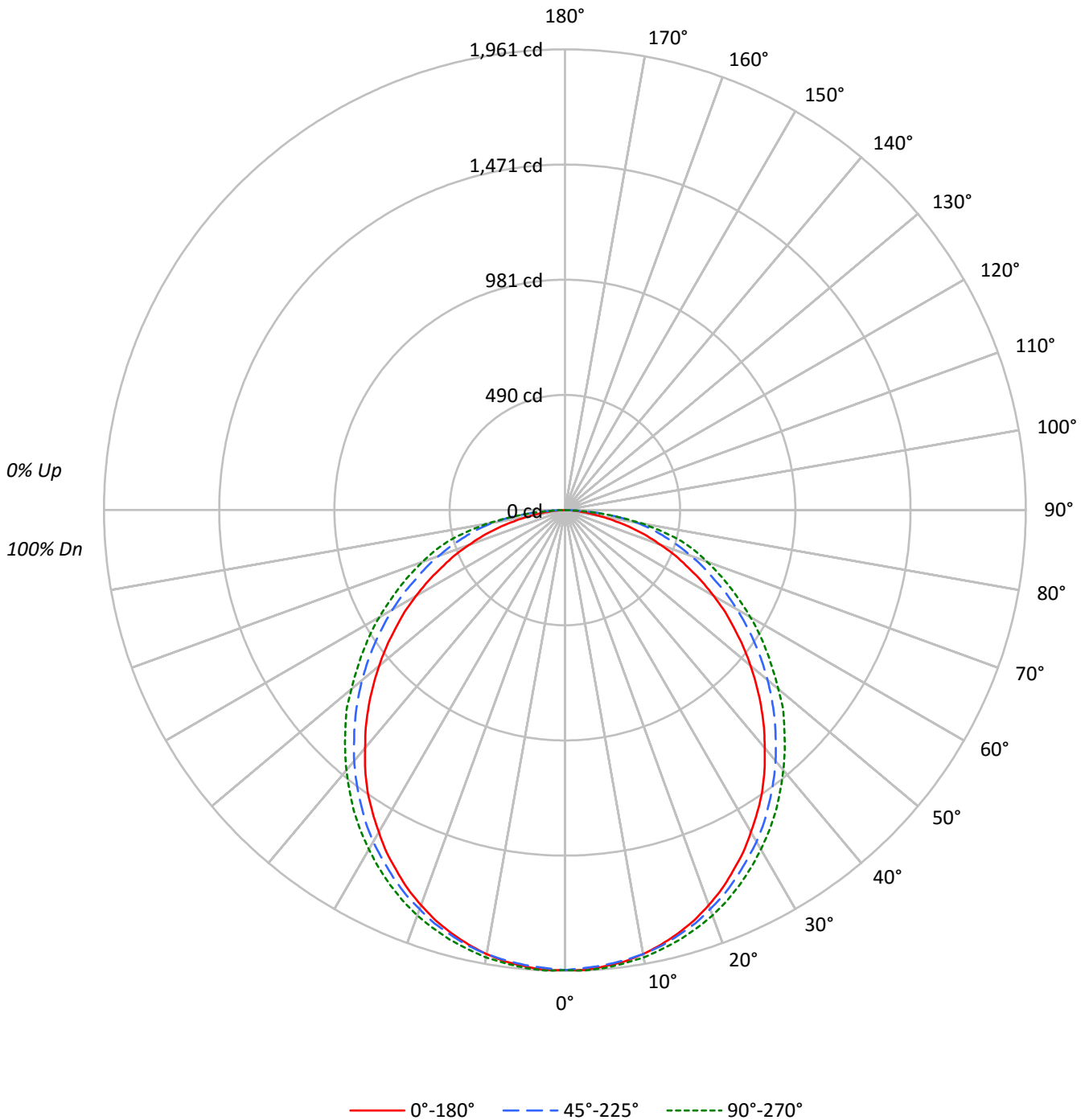
Lumens per Lamp: N/A  
Luminaire Lumens: 5573.0 lumens  
Efficiency: N/A  
Efficacy: 123.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 45  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83				83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69				69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58				58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49				49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42				42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37				37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33				33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29				29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26				26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24				24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2634	2634	2634
5°	2632	2625	2642
10°	2622	2622	2641
15°	2596	2609	2636
20°	2563	2588	2628
25°	2515	2562	2612
30°	2459	2533	2591
35°	2405	2492	2570
40°	2323	2450	2540
45°	2247	2402	2513
50°	2160	2357	2483
55°	2064	2313	2458
60°	1967	2277	2453
65°	1843	2238	2468
70°	1706	2249	2535
75°	1528	2292	2678
80°	1234	2428	2620
85°	929	2132	2076



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.3	3.3
10°-20°	529.6	9.5
20°-30°	796.1	14.3
30°-40°	948.3	17.0
40°-50°	970.5	17.4
50°-60°	873.8	15.7
60°-70°	686.2	12.3
70°-80°	445.4	8.0
80°-90°	137.7	2.5
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°	1511.1	27.1
0°-40°	2459.4	44.1
0°-60°	4303.7	77.2
0°-90°	5573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5573.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1958	1958	1958	1958	1958	
5°	1949	1952	1944	1954	1956	185
15°	1864	1869	1873	1889	1892	526
25°	1694	1708	1726	1754	1760	780
35°	1464	1482	1517	1554	1565	913
45°	1181	1209	1262	1310	1321	910
55°	880	919	986	1037	1048	789
65°	579	623	703	761	775	576
75°	294	350	441	501	515	311
85°	60	112	138	134	134	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1957.8	1957.8	1957.8	1957.8	1957.8
2.5°	1959.6	1959.6	1950.8	1959.6	1961.4
5°	1949.0	1952.5	1943.7	1954.3	1956.1
7.5°	1938.4	1938.4	1933.0	1943.7	1945.4
10°	1918.9	1920.7	1918.9	1931.3	1933.0
12.5°	1894.1	1897.6	1899.4	1911.8	1913.6
15°	1864.0	1869.3	1872.9	1888.8	1892.3
17.5°	1830.4	1835.7	1844.5	1862.2	1865.8
20°	1789.7	1796.7	1807.4	1830.4	1835.7
22.5°	1745.4	1752.5	1770.2	1791.4	1800.3
25°	1694.1	1708.2	1725.9	1754.3	1759.6
27.5°	1642.7	1655.1	1678.1	1708.2	1715.3
30°	1582.6	1602.0	1630.3	1660.4	1667.5
32.5°	1524.1	1543.6	1577.2	1609.1	1618.0
35°	1463.9	1481.6	1517.1	1554.2	1564.8
37.5°	1394.9	1417.9	1456.9	1494.0	1504.7
40°	1322.3	1350.7	1394.9	1433.9	1446.2
42.5°	1253.3	1283.4	1327.6	1370.1	1384.3
45°	1180.7	1209.0	1262.1	1309.9	1320.6
47.5°	1106.4	1138.2	1194.9	1242.7	1260.4
50°	1032.0	1065.7	1125.8	1175.4	1186.0
52.5°	957.7	993.1	1056.8	1109.9	1115.2
55°	879.8	918.7	986.0	1037.3	1048.0
57.5°	809.0	842.6	915.2	968.3	980.7
60°	731.1	768.3	846.2	895.7	911.6
62.5°	656.7	695.7	777.1	826.7	840.8
65°	578.9	623.1	702.8	761.2	775.3
67.5°	511.6	554.1	639.0	695.7	709.8
70°	433.7	481.5	571.8	630.2	644.3
72.5°	366.4	416.0	506.3	562.9	584.2
75°	293.9	350.5	440.8	501.0	515.1
77.5°	223.0	288.5	380.6	426.6	426.6
80°	159.3	228.4	313.3	334.6	338.1
82.5°	104.4	171.7	231.9	230.1	230.1
85°	60.2	111.5	138.1	134.5	134.5
87.5°	23.0	46.0	49.6	49.6	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)