

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: P314416

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA08-W2A-U-3500K**

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: P314416  
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-L83050-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3500K 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**

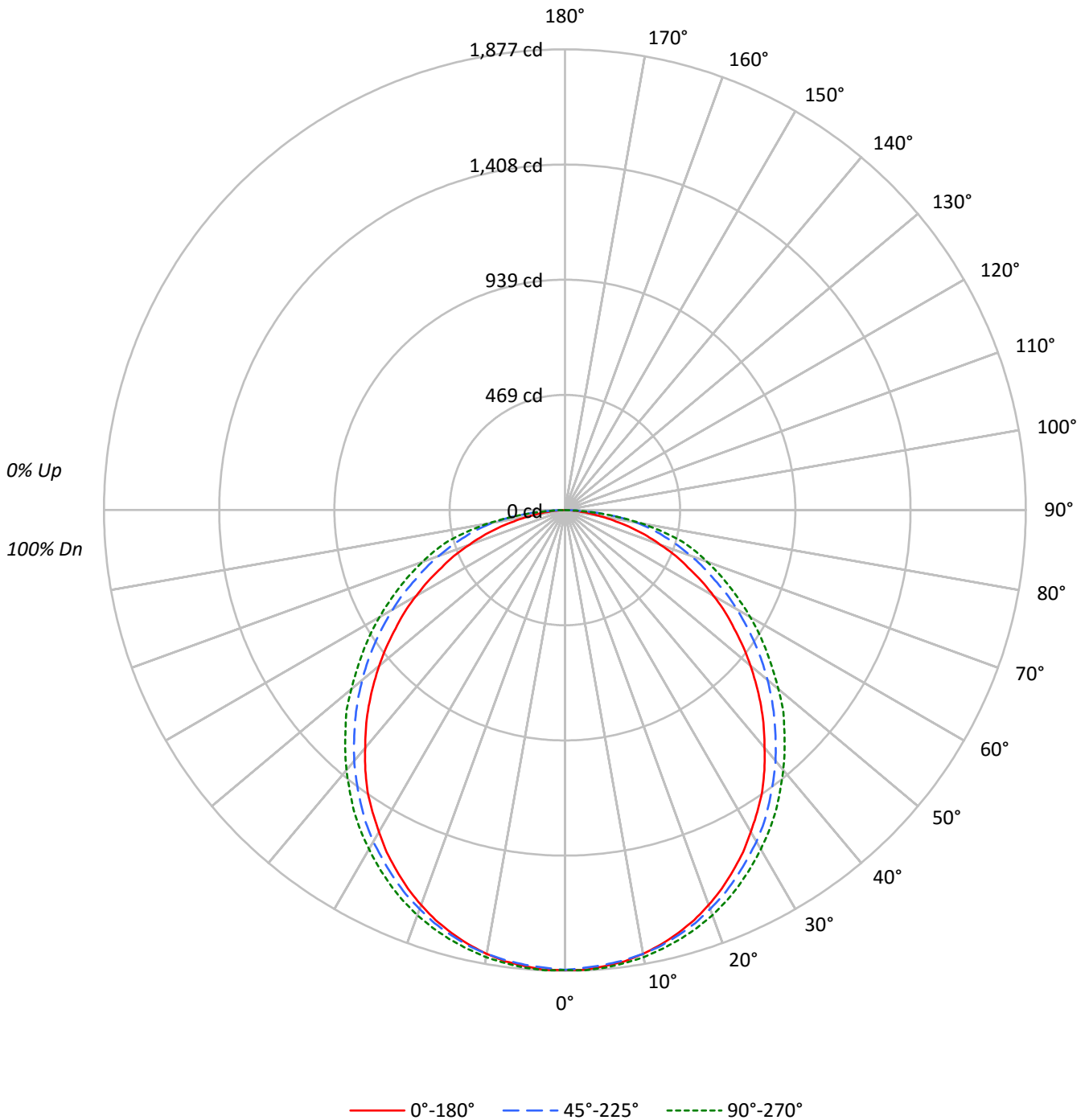
Lumens per Lamp: N/A  
Luminaire Lumens: 5332.0 lumens  
Efficiency: N/A  
Efficacy: 123.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2520	2520	2520
5°	2519	2512	2528
10°	2508	2508	2527
15°	2484	2496	2522
20°	2452	2476	2515
25°	2406	2451	2499
30°	2352	2423	2479
35°	2301	2384	2459
40°	2222	2344	2430
45°	2150	2298	2404
50°	2067	2255	2375
55°	1974	2213	2352
60°	1882	2179	2347
65°	1763	2141	2362
70°	1632	2152	2425
75°	1461	2192	2562
80°	1181	2323	2507
85°	889	2039	1987



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.3	3.3
10°-20°	506.7	9.5
20°-30°	761.7	14.3
30°-40°	907.3	17.0
40°-50°	928.6	17.4
50°-60°	836.0	15.7
60°-70°	656.5	12.3
70°-80°	426.1	8.0
80°-90°	131.8	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°	1445.7	27.1
0°-40°	2353.0	44.1
0°-60°	4117.6	77.2
0°-90°	5332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5332.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1873	1873	1873	1873	1873	
5°	1865	1868	1860	1870	1872	177
15°	1783	1788	1792	1807	1810	503
25°	1621	1634	1651	1678	1684	747
35°	1401	1418	1451	1487	1497	874
45°	1130	1157	1208	1253	1264	871
55°	842	879	943	992	1003	755
65°	554	596	672	728	742	551
75°	281	335	422	479	493	297
85°	58	107	132	129	129	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1873.2	1873.2	1873.2	1873.2	1873.2
2.5°	1874.9	1874.9	1866.4	1874.9	1876.6
5°	1864.7	1868.1	1859.6	1869.8	1871.5
7.5°	1854.5	1854.5	1849.5	1859.6	1861.3
10°	1835.9	1837.6	1835.9	1847.8	1849.5
12.5°	1812.2	1815.6	1817.3	1829.1	1830.8
15°	1783.4	1788.5	1791.9	1807.1	1810.5
17.5°	1751.2	1756.3	1764.8	1781.7	1785.1
20°	1712.3	1719.0	1729.2	1751.2	1756.3
22.5°	1669.9	1676.7	1693.6	1714.0	1722.4
25°	1620.8	1634.4	1651.3	1678.4	1683.5
27.5°	1571.7	1583.6	1605.6	1634.4	1641.1
30°	1514.1	1532.7	1559.8	1588.6	1595.4
32.5°	1458.2	1476.9	1509.0	1539.5	1548.0
35°	1400.6	1417.6	1451.4	1487.0	1497.2
37.5°	1334.6	1356.6	1393.9	1429.4	1439.6
40°	1265.1	1292.2	1334.6	1371.8	1383.7
42.5°	1199.1	1227.9	1270.2	1310.9	1324.4
45°	1129.7	1156.8	1207.6	1253.3	1263.5
47.5°	1058.5	1089.0	1143.2	1188.9	1205.9
50°	987.4	1019.6	1077.2	1124.6	1134.7
52.5°	916.3	950.1	1011.1	1061.9	1067.0
55°	841.7	879.0	943.4	992.5	1002.6
57.5°	774.0	806.2	875.6	926.4	938.3
60°	699.5	735.0	809.6	857.0	872.2
62.5°	628.3	665.6	743.5	790.9	804.5
65°	553.8	596.2	672.4	728.3	741.8
67.5°	489.5	530.1	611.4	665.6	679.1
70°	414.9	460.7	547.0	602.9	616.5
72.5°	350.6	398.0	484.4	538.6	558.9
75°	281.1	335.3	421.7	479.3	492.8
77.5°	213.4	276.1	364.1	408.2	408.2
80°	152.4	218.5	299.8	320.1	323.5
82.5°	99.9	164.3	221.9	220.2	220.2
85°	57.6	106.7	132.1	128.7	128.7
87.5°	22.0	44.0	47.4	47.4	45.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)