

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: P314415

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA08-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: P314415  
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-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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**

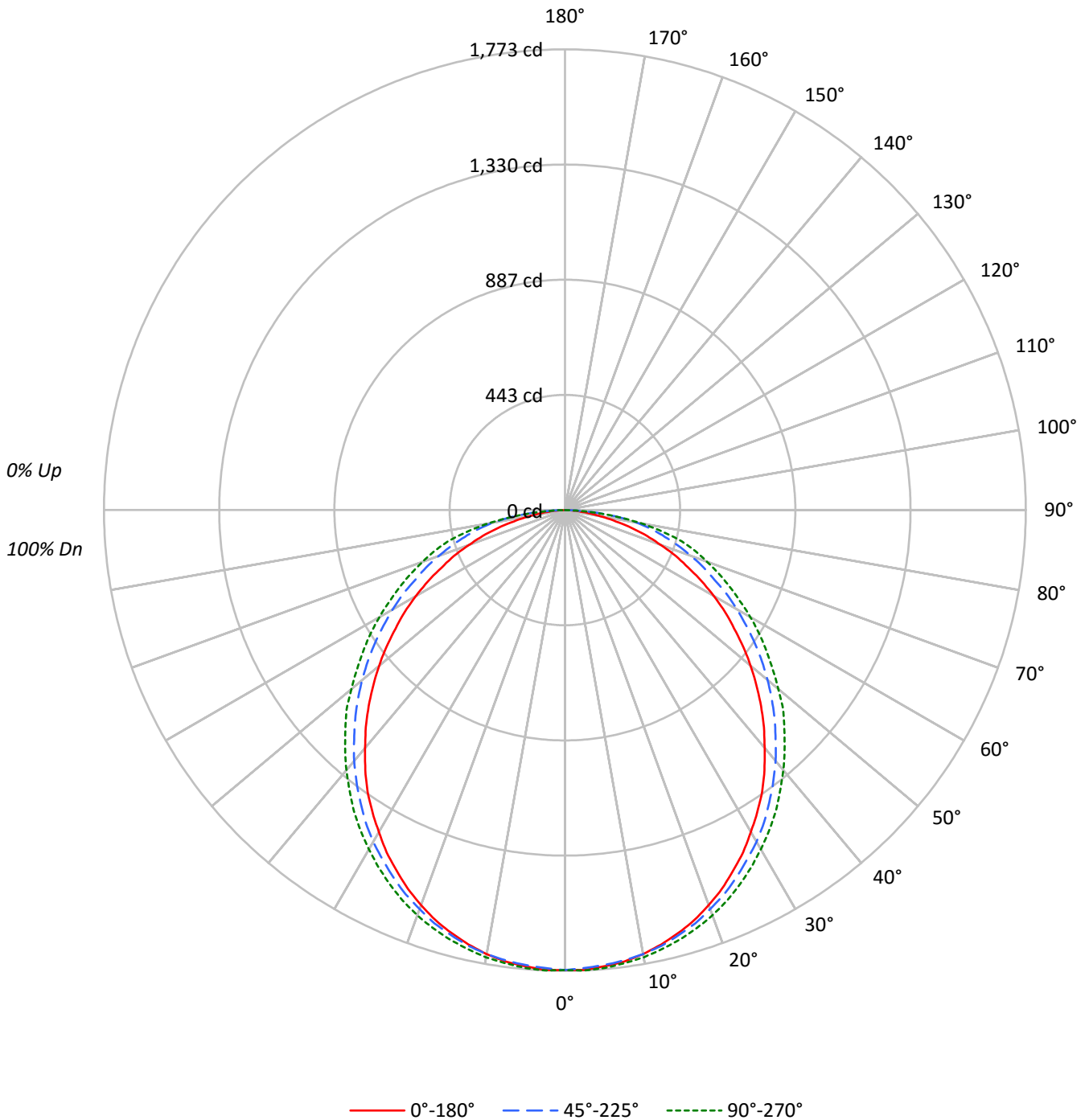
Lumens per Lamp: N/A  
Luminaire Lumens: 5038.0 lumens  
Efficiency: N/A  
Efficacy: 117.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2381	2381	2381
5°	2380	2373	2388
10°	2370	2370	2388
15°	2347	2358	2383
20°	2317	2339	2376
25°	2273	2316	2362
30°	2223	2290	2342
35°	2174	2253	2324
40°	2100	2215	2296
45°	2031	2171	2272
50°	1953	2130	2244
55°	1866	2091	2222
60°	1778	2058	2218
65°	1666	2023	2231
70°	1543	2033	2292
75°	1381	2072	2421
80°	1116	2194	2368
85°	840	1927	1877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.6	3.3
10°-20°	478.8	9.5
20°-30°	719.7	14.3
30°-40°	857.3	17.0
40°-50°	877.4	17.4
50°-60°	789.9	15.7
60°-70°	620.3	12.3
70°-80°	402.6	8.0
80°-90°	124.5	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°	1366.0	27.1
0°-40°	2223.3	44.1
0°-60°	3890.6	77.2
0°-90°	5038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5038.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1770	1770	1770	1770	1770	
5°	1762	1765	1757	1767	1768	167
15°	1685	1690	1693	1708	1711	475
25°	1531	1544	1560	1586	1591	705
35°	1323	1339	1371	1405	1415	826
45°	1067	1093	1141	1184	1194	823
55°	795	830	891	938	947	713
65°	523	563	635	688	701	521
75°	266	317	398	453	466	281
85°	54	101	125	122	122	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1769.9	1769.9	1769.9	1769.9	1769.9
2.5°	1771.5	1771.5	1763.5	1771.5	1773.1
5°	1761.9	1765.1	1757.1	1766.7	1768.3
7.5°	1752.3	1752.3	1747.5	1757.1	1758.7
10°	1734.7	1736.3	1734.7	1745.9	1747.5
12.5°	1712.3	1715.5	1717.1	1728.3	1729.9
15°	1685.1	1689.9	1693.1	1707.5	1710.7
17.5°	1654.7	1659.5	1667.5	1683.5	1686.7
20°	1617.9	1624.3	1633.9	1654.7	1659.5
22.5°	1577.9	1584.3	1600.3	1619.5	1627.5
25°	1531.4	1544.2	1560.2	1585.9	1590.7
27.5°	1485.0	1496.2	1517.0	1544.2	1550.6
30°	1430.6	1448.2	1473.8	1501.0	1507.4
32.5°	1377.8	1395.4	1425.8	1454.6	1462.6
35°	1323.4	1339.4	1371.4	1405.0	1414.6
37.5°	1261.0	1281.8	1317.0	1350.6	1360.2
40°	1195.4	1221.0	1261.0	1296.2	1307.4
42.5°	1133.0	1160.2	1200.2	1238.6	1251.4
45°	1067.4	1093.0	1141.0	1184.2	1193.8
47.5°	1000.2	1029.0	1080.2	1123.4	1139.4
50°	932.9	963.4	1017.8	1062.6	1072.2
52.5°	865.7	897.7	955.4	1003.4	1008.2
55°	795.3	830.5	891.3	937.7	947.4
57.5°	731.3	761.7	827.3	875.3	886.5
60°	660.9	694.5	764.9	809.7	824.1
62.5°	593.7	628.9	702.5	747.3	760.1
65°	523.3	563.3	635.3	688.1	700.9
67.5°	462.5	500.9	577.7	628.9	641.7
70°	392.1	435.3	516.9	569.7	582.5
72.5°	331.3	376.1	457.7	508.9	528.1
75°	265.6	316.9	398.5	452.9	465.7
77.5°	201.6	260.8	344.1	385.7	385.7
80°	144.0	206.4	283.2	302.4	305.6
82.5°	94.4	155.2	209.6	208.0	208.0
85°	54.4	100.8	124.8	121.6	121.6
87.5°	20.8	41.6	44.8	44.8	43.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)