

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: P314043

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-CA08-W2A-U-4500K**

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: P314043  
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: 24FCZ2-55HE-UNV-L83050-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 4500K 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: 5379.0 lumens  
Efficiency: N/A  
Efficacy: 119.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

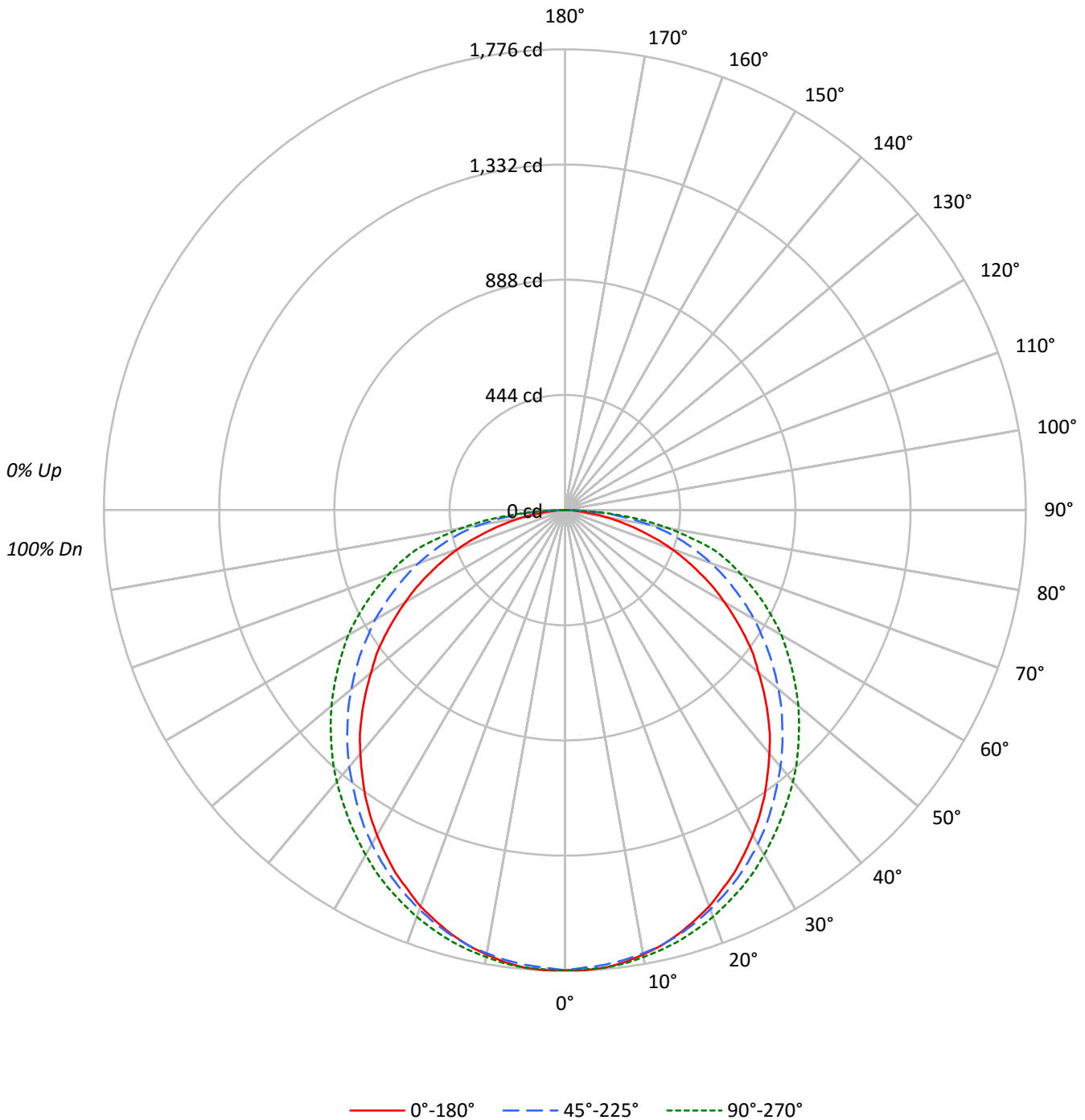
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2387	2387	2387
5°	2391	2377	2391
10°	2377	2370	2390
15°	2357	2362	2391
20°	2328	2346	2389
25°	2292	2329	2387
30°	2249	2310	2385
35°	2204	2286	2386
40°	2154	2269	2401
45°	2102	2255	2421
50°	2040	2249	2458
55°	1989	2252	2508
60°	1911	2271	2593
65°	1824	2295	2687
70°	1727	2366	2836
75°	1540	2468	3099
80°	1313	2614	3167
85°	937	2590	3030



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.9	3.1
10°-20°	480.0	8.9
20°-30°	725.1	13.5
30°-40°	873.9	16.2
40°-50°	917.4	17.1
50°-60°	858.3	16.0
60°-70°	708.8	13.2
70°-80°	483.0	9.0
80°-90°	164.7	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°	1373.0	25.5
0°-40°	2246.8	41.8
0°-60°	4022.5	74.8
0°-90°	5379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5379.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1774	1774	1774	1774	1774	
5°	1770	1769	1760	1770	1770	168
15°	1692	1694	1695	1713	1717	477
25°	1544	1551	1569	1599	1608	710
35°	1342	1356	1392	1438	1453	839
45°	1105	1128	1185	1249	1272	852
55°	848	882	960	1039	1069	757
65°	573	621	721	812	844	568
75°	296	364	475	564	596	316
85°	61	120	168	189	196	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1773.9	1773.9	1773.9	1773.9	1773.9
2.5°	1775.7	1773.9	1765.0	1773.9	1772.2
5°	1770.4	1768.6	1759.7	1770.4	1770.4
7.5°	1757.9	1757.9	1749.0	1761.5	1763.2
10°	1740.0	1740.0	1734.7	1749.0	1749.0
12.5°	1718.6	1718.6	1718.6	1732.9	1734.7
15°	1691.9	1693.6	1695.4	1713.3	1716.8
17.5°	1659.7	1663.3	1668.7	1690.1	1693.6
20°	1625.8	1629.4	1638.3	1663.3	1668.7
22.5°	1583.0	1591.9	1604.4	1633.0	1638.3
25°	1543.7	1550.9	1568.7	1599.1	1608.0
27.5°	1495.5	1506.2	1529.4	1561.6	1574.1
30°	1447.4	1458.1	1486.6	1524.1	1534.8
32.5°	1395.6	1411.7	1442.0	1481.3	1493.8
35°	1342.1	1356.3	1392.0	1438.4	1452.7
37.5°	1283.2	1302.8	1342.1	1392.0	1409.9
40°	1226.1	1247.5	1292.1	1345.6	1367.0
42.5°	1168.9	1190.4	1240.3	1301.0	1322.4
45°	1104.7	1127.9	1185.0	1249.3	1272.5
47.5°	1040.5	1069.0	1131.5	1199.3	1224.3
50°	974.4	1006.5	1074.4	1145.7	1174.3
52.5°	915.5	945.9	1017.3	1094.0	1120.8
55°	847.7	881.6	960.1	1038.7	1069.0
57.5°	778.1	815.6	899.5	985.1	1015.5
60°	710.3	751.3	844.1	929.8	963.7
62.5°	644.3	685.3	781.7	870.9	904.8
65°	572.9	621.1	721.0	812.0	844.1
67.5°	505.1	556.8	662.1	751.3	783.5
70°	439.0	489.0	601.4	688.9	721.0
72.5°	367.6	424.7	537.2	628.2	662.1
75°	296.3	364.1	474.7	564.0	596.1
77.5°	230.2	299.8	410.5	483.6	499.7
80°	169.5	240.9	337.3	389.1	408.7
82.5°	108.9	180.3	257.0	294.5	310.5
85°	60.7	119.6	167.8	189.2	196.3
87.5°	25.0	51.8	67.8	76.7	76.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)