

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: P310948

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-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: P310948  
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-L82765-CA08-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 5304.0 lumens  
Efficiency: N/A  
Efficacy: 117.9 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

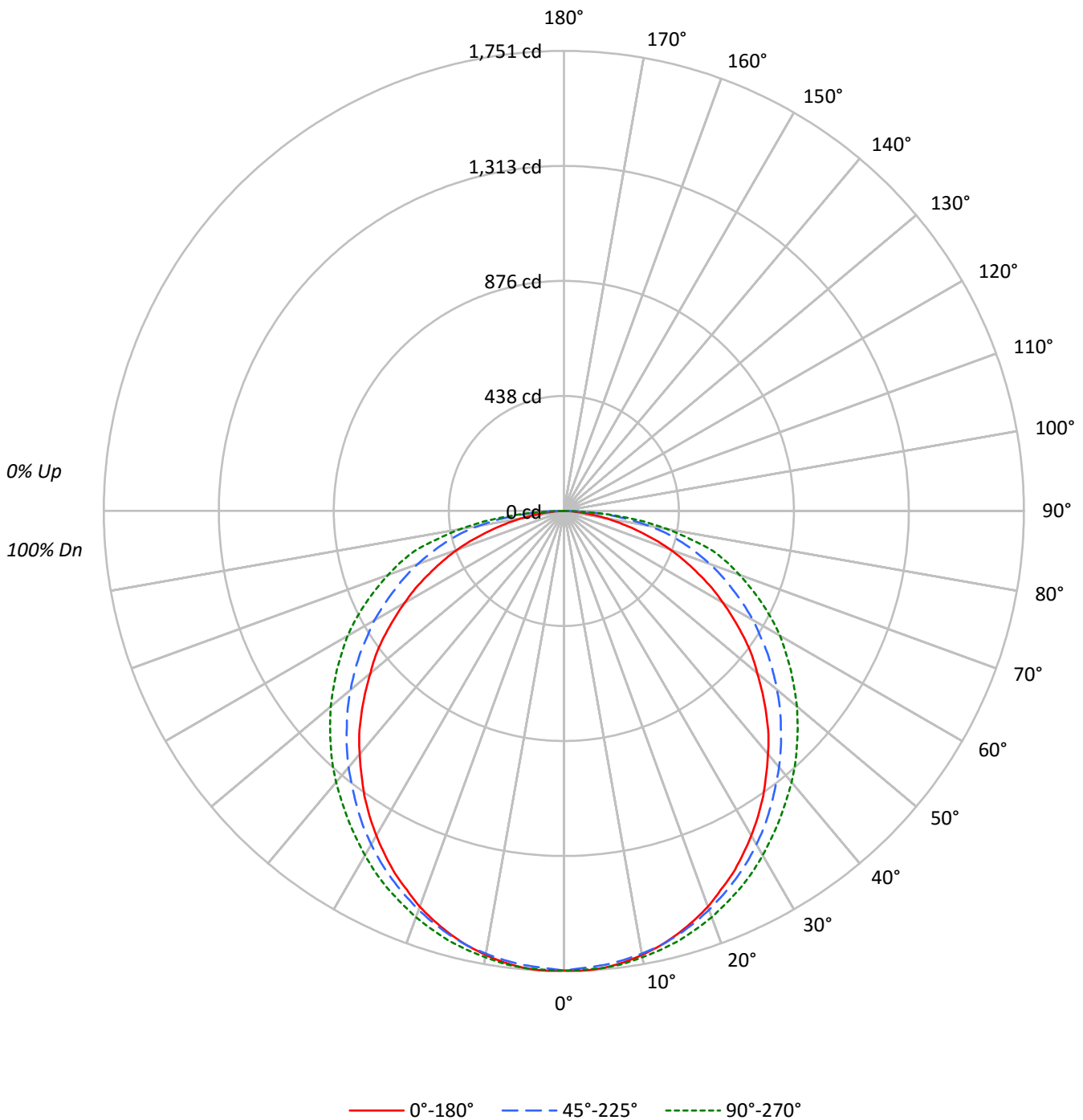
Input Watts (W): 45  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2354	2354	2354
5°	2358	2343	2358
10°	2344	2337	2356
15°	2324	2329	2358
20°	2296	2313	2356
25°	2260	2296	2354
30°	2217	2277	2351
35°	2174	2255	2353
40°	2124	2238	2368
45°	2073	2223	2387
50°	2011	2218	2424
55°	1961	2221	2473
60°	1885	2240	2557
65°	1798	2263	2650
70°	1703	2333	2797
75°	1519	2433	3056
80°	1296	2577	3123
85°	923	2553	2989



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.5	3.1
10°-20°	473.4	8.9
20°-30°	714.9	13.5
30°-40°	861.7	16.2
40°-50°	904.6	17.1
50°-60°	846.3	16.0
60°-70°	698.9	13.2
70°-80°	476.2	9.0
80°-90°	162.4	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°	1353.8	25.5
0°-40°	2215.5	41.8
0°-60°	3966.4	74.8
0°-90°	5304.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5304.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1749	1749	1749	1749	1749	
5°	1746	1744	1735	1746	1746	166
15°	1668	1670	1672	1689	1693	470
25°	1522	1529	1547	1577	1586	700
35°	1323	1337	1373	1418	1432	827
45°	1089	1112	1168	1232	1255	840
55°	836	869	947	1024	1054	746
65°	565	612	711	801	832	560
75°	292	359	468	556	588	311
85°	60	118	165	186	194	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1749.2	1749.2	1749.2	1749.2	1749.2
2.5°	1751.0	1749.2	1740.4	1749.2	1747.5
5°	1745.7	1743.9	1735.1	1745.7	1745.7
7.5°	1733.4	1733.4	1724.6	1736.9	1738.7
10°	1715.8	1715.8	1710.5	1724.6	1724.6
12.5°	1694.7	1694.7	1694.7	1708.7	1710.5
15°	1668.3	1670.0	1671.8	1689.4	1692.9
17.5°	1636.6	1640.1	1645.4	1666.5	1670.0
20°	1603.2	1606.7	1615.5	1640.1	1645.4
22.5°	1560.9	1569.7	1582.0	1610.2	1615.5
25°	1522.2	1529.2	1546.8	1576.8	1585.6
27.5°	1474.7	1485.2	1508.1	1539.8	1552.1
30°	1427.2	1437.7	1465.9	1502.8	1513.4
32.5°	1376.1	1392.0	1421.9	1460.6	1472.9
35°	1323.3	1337.4	1372.6	1418.4	1432.5
37.5°	1265.3	1284.6	1323.3	1372.6	1390.2
40°	1209.0	1230.1	1274.1	1326.9	1348.0
42.5°	1152.7	1173.8	1223.0	1282.9	1304.0
45°	1089.3	1112.2	1168.5	1231.8	1254.7
47.5°	1025.9	1054.1	1115.7	1182.6	1207.2
50°	960.8	992.5	1059.4	1129.8	1157.9
52.5°	902.8	932.7	1003.1	1078.7	1105.1
55°	835.9	869.3	946.8	1024.2	1054.1
57.5°	767.3	804.2	886.9	971.4	1001.3
60°	700.4	740.9	832.4	916.8	950.3
62.5°	635.3	675.8	770.8	858.8	892.2
65°	564.9	612.4	710.9	800.7	832.4
67.5°	498.0	549.0	652.9	740.9	772.5
70°	432.9	482.2	593.0	679.3	710.9
72.5°	362.5	418.8	529.7	619.4	652.9
75°	292.1	359.0	468.1	556.1	587.8
77.5°	227.0	295.6	404.7	476.9	492.7
80°	167.2	237.6	332.6	383.6	403.0
82.5°	107.3	177.7	253.4	290.4	306.2
85°	59.8	117.9	165.4	186.5	193.6
87.5°	24.6	51.0	66.9	75.7	75.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)