

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: P310946

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CA08-W2A-U-5500K**

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: P310946
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-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 5276.0 lumens
Efficiency: N/A
Efficacy: 119.1 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

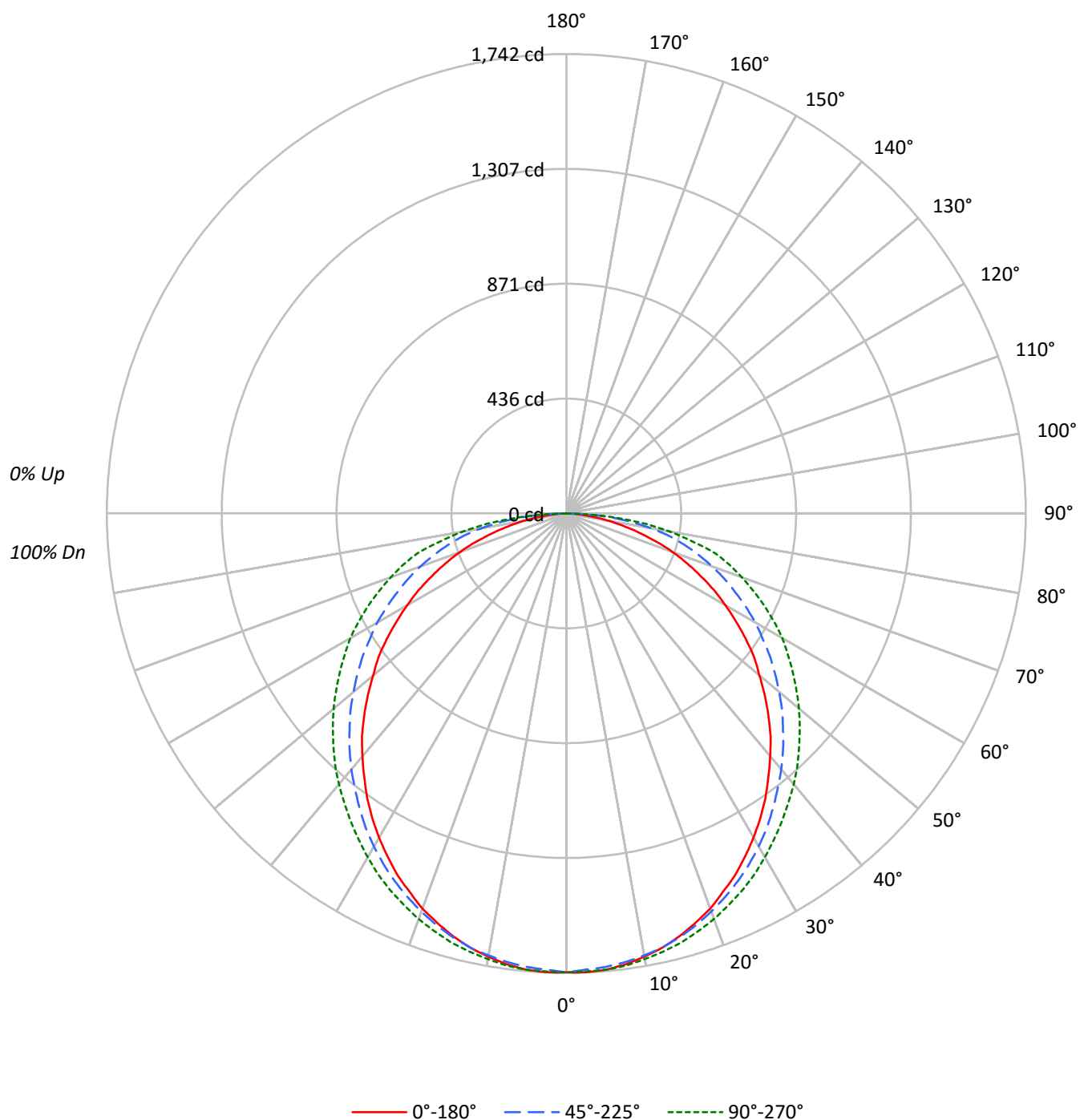
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2341	2341	2341
5°	2345	2331	2345
10°	2332	2325	2344
15°	2312	2316	2346
20°	2283	2301	2343
25°	2248	2284	2341
30°	2206	2266	2339
35°	2162	2243	2340
40°	2112	2226	2355
45°	2062	2212	2375
50°	2001	2206	2411
55°	1951	2209	2460
60°	1875	2228	2544
65°	1789	2252	2636
70°	1694	2321	2782
75°	1511	2420	3040
80°	1289	2563	3106
85°	919	2540	2973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.7	3.1
10°-20°	470.8	8.9
20°-30°	711.2	13.5
30°-40°	857.1	16.2
40°-50°	899.8	17.1
50°-60°	841.8	16.0
60°-70°	695.2	13.2
70°-80°	473.7	9.0
80°-90°	161.6	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°	1346.7	25.5
0°-40°	2203.8	41.8
0°-60°	3945.5	74.8
0°-90°	5276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1740	1740	1740	1740	1740	
5°	1736	1735	1726	1736	1736	165
15°	1660	1661	1663	1680	1684	468
25°	1514	1521	1539	1568	1577	697
35°	1316	1330	1365	1411	1425	823
45°	1084	1106	1162	1225	1248	836
55°	832	865	942	1019	1048	742
65°	562	609	707	796	828	557
75°	291	357	466	553	585	310
85°	60	117	164	186	193	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1740.0	1740.0	1740.0	1740.0	1740.0
2.5°	1741.7	1740.0	1731.2	1740.0	1738.2
5°	1736.5	1734.7	1726.0	1736.5	1736.5
7.5°	1724.2	1724.2	1715.5	1727.7	1729.5
10°	1706.7	1706.7	1701.5	1715.5	1715.5
12.5°	1685.7	1685.7	1685.7	1699.7	1701.5
15°	1659.5	1661.2	1663.0	1680.5	1684.0
17.5°	1627.9	1631.4	1636.7	1657.7	1661.2
20°	1594.7	1598.2	1606.9	1631.4	1636.7
22.5°	1552.7	1561.4	1573.7	1601.7	1606.9
25°	1514.2	1521.2	1538.7	1568.4	1577.2
27.5°	1466.9	1477.4	1500.2	1531.7	1543.9
30°	1419.6	1430.1	1458.2	1494.9	1505.4
32.5°	1368.9	1384.6	1414.4	1452.9	1465.2
35°	1316.4	1330.4	1365.4	1410.9	1424.9
37.5°	1258.6	1277.9	1316.4	1365.4	1382.9
40°	1202.6	1223.6	1267.3	1319.9	1340.9
42.5°	1146.6	1167.6	1216.6	1276.1	1297.1
45°	1083.5	1106.3	1162.3	1225.3	1248.1
47.5°	1020.5	1048.5	1109.8	1176.3	1200.8
50°	955.8	987.3	1053.8	1123.8	1151.8
52.5°	898.0	927.8	997.8	1073.0	1099.3
55°	831.5	864.7	941.8	1018.8	1048.5
57.5°	763.2	800.0	882.2	966.3	996.0
60°	696.7	737.0	828.0	912.0	945.3
62.5°	631.9	672.2	766.7	854.2	887.5
65°	561.9	609.2	707.2	796.5	828.0
67.5°	495.4	546.2	649.4	737.0	768.5
70°	430.6	479.6	589.9	675.7	707.2
72.5°	360.6	416.6	526.9	616.2	649.4
75°	290.6	357.1	465.6	553.2	584.7
77.5°	225.8	294.1	402.6	474.4	490.1
80°	166.3	236.3	330.8	381.6	400.9
82.5°	106.8	176.8	252.1	288.8	304.6
85°	59.5	117.3	164.5	185.6	192.6
87.5°	24.5	50.8	66.5	75.3	75.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)