

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: P310944

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-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: P310944
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-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: 5155.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

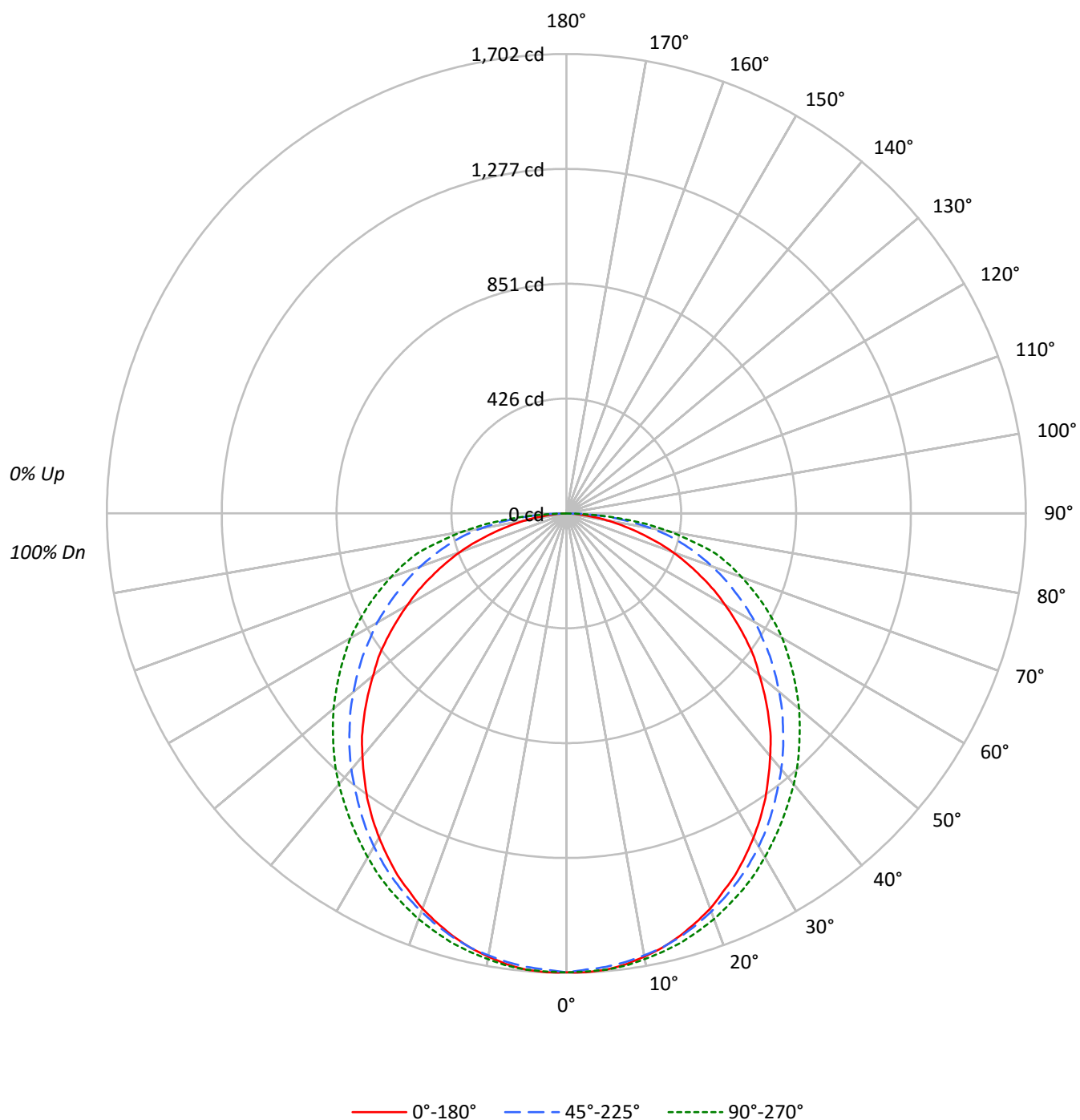
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2287	2287	2287
5°	2292	2278	2292
10°	2278	2271	2290
15°	2259	2263	2292
20°	2231	2248	2290
25°	2196	2232	2288
30°	2155	2213	2285
35°	2113	2191	2287
40°	2064	2175	2301
45°	2015	2161	2320
50°	1955	2155	2356
55°	1906	2159	2403
60°	1832	2177	2485
65°	1748	2200	2576
70°	1655	2268	2718
75°	1476	2365	2970
80°	1259	2505	3035
85°	898	2482	2904



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.9	3.1
10°-20°	460.1	8.9
20°-30°	694.9	13.5
30°-40°	837.5	16.2
40°-50°	879.2	17.1
50°-60°	822.5	16.0
60°-70°	679.3	13.2
70°-80°	462.9	9.0
80°-90°	157.9	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°	1315.8	25.5
0°-40°	2153.3	41.8
0°-60°	3855.0	74.8
0°-90°	5155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1697	1695	1686	1697	1697	161
15°	1621	1623	1625	1642	1645	457
25°	1479	1486	1503	1532	1541	681
35°	1286	1300	1334	1378	1392	804
45°	1059	1081	1136	1197	1220	817
55°	812	845	920	995	1024	725
65°	549	595	691	778	809	545
75°	284	349	455	540	571	303
85°	58	115	161	181	188	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1700.1	1700.1	1700.1	1700.1	1700.1
2.5°	1701.8	1700.1	1691.5	1700.1	1698.4
5°	1696.7	1694.9	1686.4	1696.7	1696.7
7.5°	1684.7	1684.7	1676.1	1688.1	1689.8
10°	1667.6	1667.6	1662.4	1676.1	1676.1
12.5°	1647.1	1647.1	1647.1	1660.7	1662.4
15°	1621.4	1623.1	1624.8	1641.9	1645.3
17.5°	1590.6	1594.0	1599.2	1619.7	1623.1
20°	1558.1	1561.5	1570.1	1594.0	1599.2
22.5°	1517.1	1525.6	1537.6	1565.0	1570.1
25°	1479.4	1486.3	1503.4	1532.5	1541.0
27.5°	1433.3	1443.5	1465.8	1496.5	1508.5
30°	1387.1	1397.3	1424.7	1460.6	1470.9
32.5°	1337.5	1352.9	1382.0	1419.6	1431.6
35°	1286.2	1299.9	1334.1	1378.5	1392.2
37.5°	1229.7	1248.5	1286.2	1334.1	1351.2
40°	1175.0	1195.5	1238.3	1289.6	1310.1
42.5°	1120.3	1140.8	1188.7	1246.8	1267.4
45°	1058.7	1080.9	1135.7	1197.2	1219.5
47.5°	997.1	1024.5	1084.4	1149.3	1173.3
50°	933.8	964.6	1029.6	1098.0	1125.4
52.5°	877.4	906.5	974.9	1048.4	1074.1
55°	812.4	844.9	920.2	995.4	1024.5
57.5°	745.7	781.6	862.0	944.1	973.2
60°	680.7	720.1	809.0	891.1	923.6
62.5°	617.4	656.8	749.1	834.6	867.1
65°	549.0	595.2	691.0	778.2	809.0
67.5°	484.0	533.6	634.5	720.1	750.8
70°	420.7	468.6	576.4	660.2	691.0
72.5°	352.3	407.1	514.8	602.0	634.5
75°	283.9	348.9	454.9	540.5	571.3
77.5°	220.6	287.3	393.4	463.5	478.9
80°	162.5	230.9	323.3	372.9	391.7
82.5°	104.3	172.7	246.3	282.2	297.6
85°	58.2	114.6	160.8	181.3	188.1
87.5°	23.9	49.6	65.0	73.5	73.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)