

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: P314047

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-CA125-W2A-U-4000K**

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: P314047
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 5309.0 lumens
Efficiency: N/A
Efficacy: 120.4 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

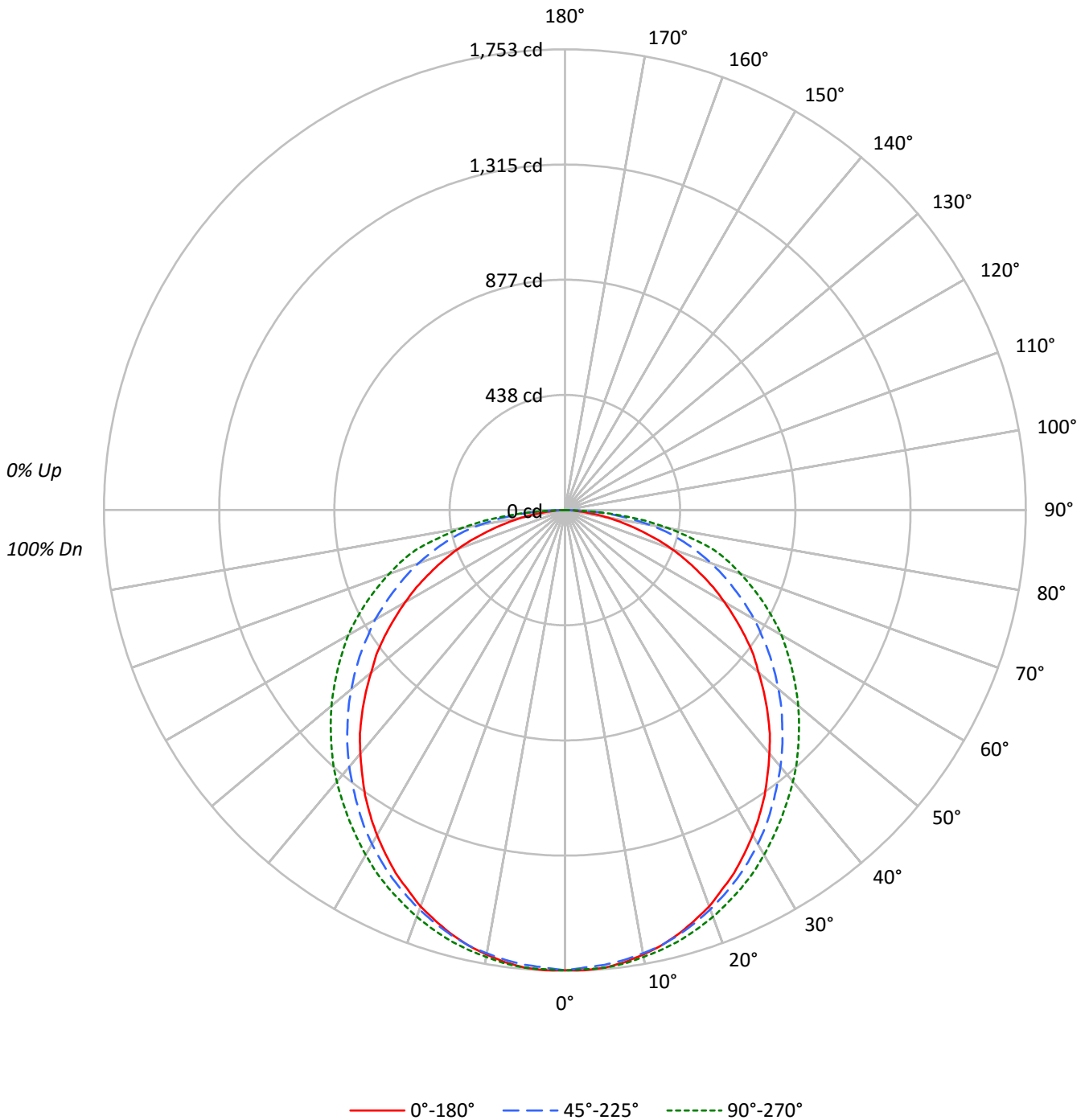
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2356	2356	2356
5°	2360	2346	2360
10°	2346	2339	2358
15°	2326	2331	2360
20°	2298	2315	2358
25°	2262	2299	2356
30°	2219	2280	2353
35°	2176	2257	2355
40°	2125	2240	2370
45°	2075	2226	2390
50°	2013	2220	2426
55°	1963	2223	2475
60°	1886	2242	2560
65°	1800	2266	2653
70°	1705	2335	2799
75°	1520	2436	3058
80°	1296	2579	3126
85°	925	2556	2992



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.7	3.1
10°-20°	473.8	8.9
20°-30°	715.6	13.5
30°-40°	862.5	16.2
40°-50°	905.5	17.1
50°-60°	847.1	16.0
60°-70°	699.6	13.2
70°-80°	476.7	9.0
80°-90°	162.6	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°	1355.1	25.5
0°-40°	2217.6	41.8
0°-60°	3970.2	74.8
0°-90°	5309.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5309.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1751	1751	1751	1751	1751	
5°	1747	1746	1737	1747	1747	166
15°	1670	1672	1673	1691	1694	471
25°	1524	1531	1548	1578	1587	701
35°	1325	1339	1374	1420	1434	828
45°	1090	1113	1170	1233	1256	841
55°	837	870	948	1025	1055	747
65°	565	613	712	802	833	561
75°	292	359	468	557	588	312
85°	60	118	166	187	194	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1750.9	1750.9	1750.9	1750.9	1750.9
2.5°	1752.6	1750.9	1742.1	1750.9	1749.1
5°	1747.3	1745.6	1736.8	1747.3	1747.3
7.5°	1735.0	1735.0	1726.2	1738.5	1740.3
10°	1717.4	1717.4	1712.1	1726.2	1726.2
12.5°	1696.3	1696.3	1696.3	1710.3	1712.1
15°	1669.8	1671.6	1673.4	1691.0	1694.5
17.5°	1638.1	1641.7	1646.9	1668.1	1671.6
20°	1604.7	1608.2	1617.0	1641.7	1646.9
22.5°	1562.4	1571.2	1583.5	1611.7	1617.0
25°	1523.6	1530.7	1548.3	1578.2	1587.0
27.5°	1476.1	1486.6	1509.5	1541.3	1553.6
30°	1428.5	1439.1	1467.3	1504.3	1514.8
32.5°	1377.4	1393.3	1423.2	1462.0	1474.3
35°	1324.6	1338.7	1373.9	1419.7	1433.8
37.5°	1266.5	1285.8	1324.6	1373.9	1391.5
40°	1210.1	1231.2	1275.3	1328.1	1349.3
42.5°	1153.7	1174.9	1224.2	1284.1	1305.2
45°	1090.3	1113.2	1169.6	1233.0	1255.9
47.5°	1026.9	1055.1	1116.7	1183.7	1208.3
50°	961.7	993.4	1060.4	1130.8	1159.0
52.5°	903.6	933.6	1004.0	1079.8	1106.2
55°	836.7	870.1	947.6	1025.2	1055.1
57.5°	768.0	805.0	887.8	972.3	1002.3
60°	701.0	741.6	833.2	917.7	951.2
62.5°	635.9	676.4	771.5	859.6	893.0
65°	565.4	613.0	711.6	801.5	833.2
67.5°	498.5	549.6	653.5	741.6	773.3
70°	433.3	482.6	593.6	679.9	711.6
72.5°	362.9	419.2	530.2	620.0	653.5
75°	292.4	359.3	468.5	556.6	588.3
77.5°	227.2	295.9	405.1	477.3	493.2
80°	167.3	237.8	332.9	384.0	403.4
82.5°	107.4	177.9	253.6	290.6	306.5
85°	59.9	118.0	165.6	186.7	193.8
87.5°	24.7	51.1	66.9	75.7	75.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)