

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: P311617

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CA08-W2A-U-3500K**

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: P311617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 5208.0 lumens
Efficiency: N/A
Efficacy: 120.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

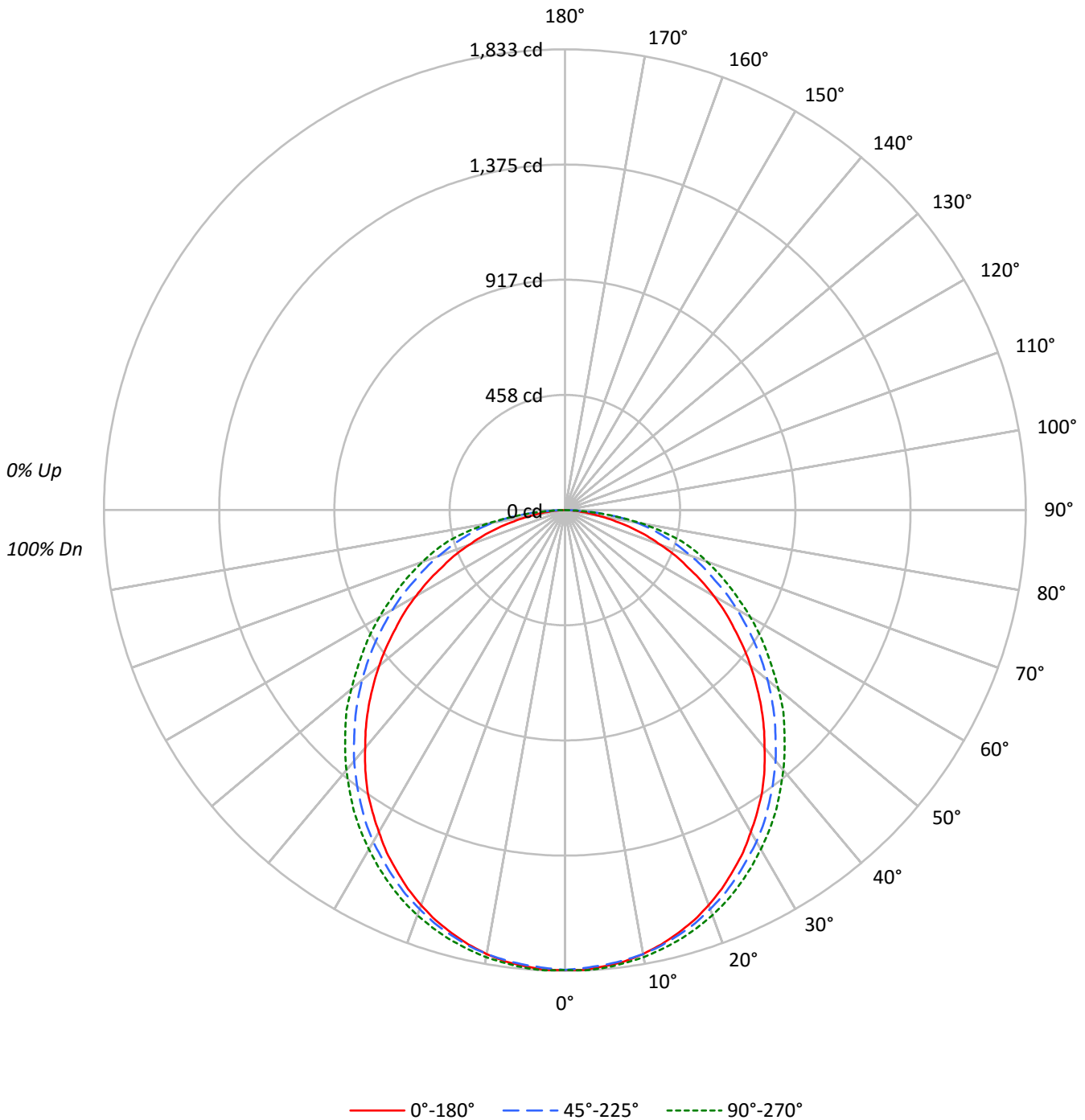
Input Watts (W): 43.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2462	2462	2462
5°	2460	2453	2469
10°	2450	2450	2468
15°	2426	2438	2463
20°	2395	2418	2456
25°	2350	2394	2441
30°	2298	2367	2421
35°	2247	2329	2402
40°	2170	2290	2374
45°	2100	2244	2348
50°	2019	2202	2320
55°	1929	2161	2297
60°	1838	2128	2292
65°	1722	2091	2307
70°	1594	2102	2369
75°	1428	2141	2503
80°	1154	2269	2448
85°	868	1991	1941



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.2	3.3
10°-20°	494.9	9.5
20°-30°	744.0	14.3
30°-40°	886.2	17.0
40°-50°	907.0	17.4
50°-60°	816.5	15.7
60°-70°	641.2	12.3
70°-80°	416.2	8.0
80°-90°	128.7	2.5
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°	1412.1	27.1
0°-40°	2298.3	44.1
0°-60°	4021.8	77.2
0°-90°	5208.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5208.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1830	1830	1830	1830	1830	
5°	1821	1825	1816	1826	1828	173
15°	1742	1747	1750	1765	1768	491
25°	1583	1596	1613	1639	1644	729
35°	1368	1385	1418	1452	1462	853
45°	1103	1130	1180	1224	1234	851
55°	822	859	921	969	979	737
65°	541	582	657	711	725	538
75°	275	328	412	468	481	291
85°	56	104	129	126	126	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1829.6	1829.6	1829.6	1829.6	1829.6
2.5°	1831.3	1831.3	1823.0	1831.3	1832.9
5°	1821.3	1824.6	1816.4	1826.3	1828.0
7.5°	1811.4	1811.4	1806.4	1816.4	1818.0
10°	1793.2	1794.9	1793.2	1804.8	1806.4
12.5°	1770.1	1773.4	1775.0	1786.6	1788.2
15°	1741.9	1746.9	1750.2	1765.1	1768.4
17.5°	1710.5	1715.5	1723.7	1740.3	1743.6
20°	1672.5	1679.1	1689.0	1710.5	1715.5
22.5°	1631.1	1637.7	1654.3	1674.1	1682.4
25°	1583.1	1596.4	1612.9	1639.4	1644.3
27.5°	1535.1	1546.7	1568.2	1596.4	1603.0
30°	1478.9	1497.1	1523.6	1551.7	1558.3
32.5°	1424.3	1442.5	1473.9	1503.7	1512.0
35°	1368.1	1384.6	1417.7	1452.4	1462.4
37.5°	1303.6	1325.1	1361.5	1396.2	1406.1
40°	1235.7	1262.2	1303.6	1339.9	1351.5
42.5°	1171.2	1199.3	1240.7	1280.4	1293.6
45°	1103.4	1129.9	1179.5	1224.1	1234.1
47.5°	1033.9	1063.7	1116.6	1161.3	1177.8
50°	964.4	995.9	1052.1	1098.4	1108.3
52.5°	895.0	928.0	987.6	1037.2	1042.2
55°	822.2	858.6	921.4	969.4	979.3
57.5°	756.0	787.4	855.2	904.9	916.5
60°	683.2	717.9	790.7	837.1	851.9
62.5°	613.7	650.1	726.2	772.5	785.8
65°	540.9	582.3	656.7	711.3	724.6
67.5°	478.1	517.8	597.2	650.1	663.4
70°	405.3	450.0	534.3	588.9	602.1
72.5°	342.4	388.7	473.1	526.1	545.9
75°	274.6	327.5	411.9	468.2	481.4
77.5°	208.4	269.6	355.7	398.7	398.7
80°	148.9	213.4	292.8	312.7	316.0
82.5°	97.6	160.5	216.7	215.1	215.1
85°	56.2	104.2	129.0	125.7	125.7
87.5°	21.5	43.0	46.3	46.3	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)