

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: P314421

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA125-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: P314421
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-L83050-S-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 5313.0 lumens
Efficiency: N/A
Efficacy: 123.3 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

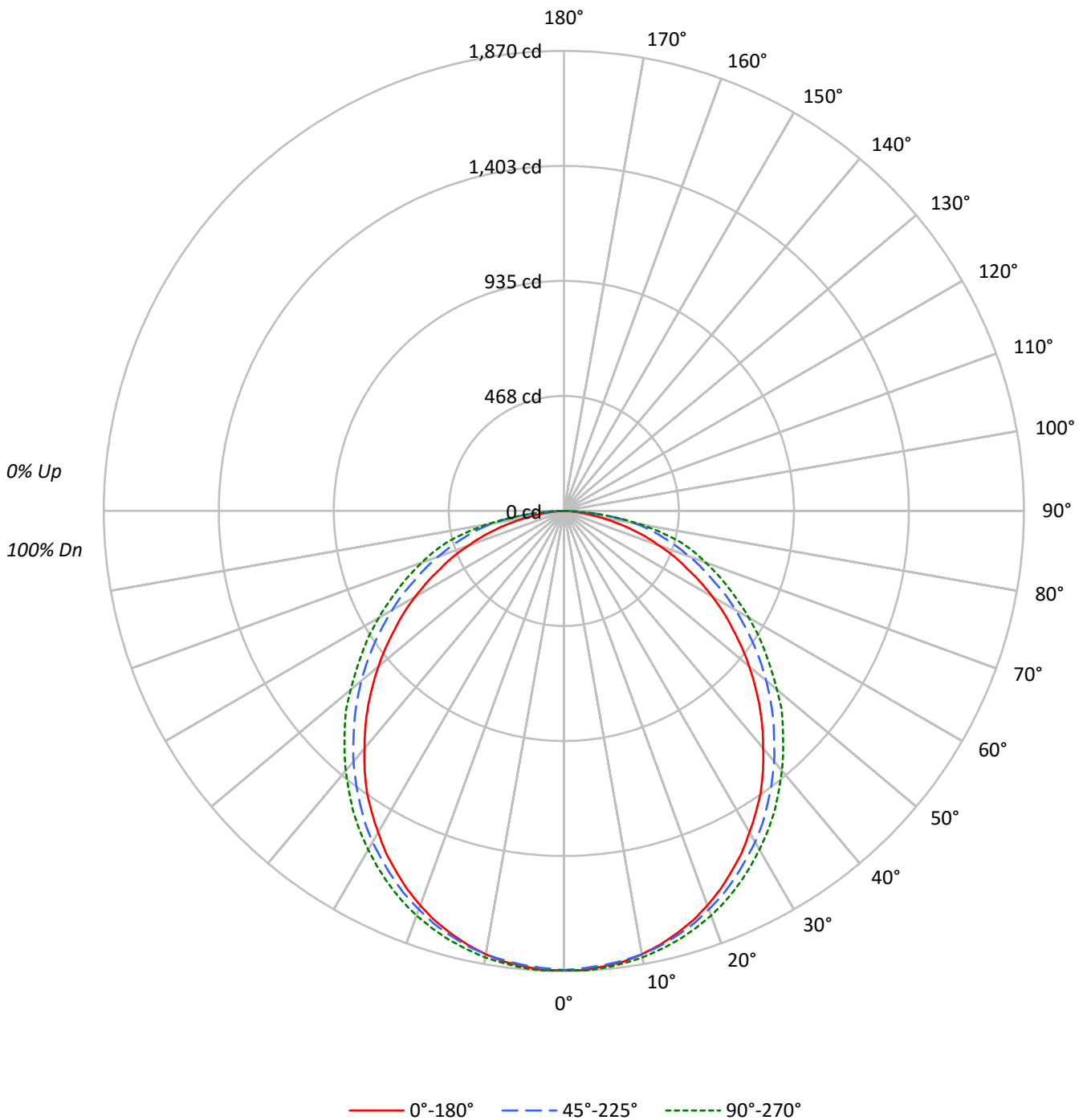
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2511	2511	2511
5°	2510	2503	2519
10°	2499	2499	2518
15°	2475	2487	2513
20°	2443	2467	2506
25°	2398	2443	2490
30°	2344	2415	2470
35°	2292	2376	2450
40°	2214	2336	2422
45°	2142	2290	2396
50°	2060	2247	2367
55°	1967	2205	2344
60°	1876	2171	2339
65°	1757	2133	2353
70°	1627	2144	2417
75°	1456	2184	2553
80°	1177	2314	2497
85°	886	2032	1981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.7	3.3
10°-20°	504.9	9.5
20°-30°	759.0	14.3
30°-40°	904.1	17.0
40°-50°	925.3	17.4
50°-60°	833.0	15.7
60°-70°	654.2	12.3
70°-80°	424.6	8.0
80°-90°	131.3	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°	1440.6	27.1
0°-40°	2344.6	44.1
0°-60°	4102.9	77.2
0°-90°	5313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1866	1866	1866	1866	1866	
5°	1858	1861	1853	1863	1865	177
15°	1777	1782	1786	1801	1804	501
25°	1615	1628	1645	1672	1678	744
35°	1396	1412	1446	1482	1492	871
45°	1126	1153	1203	1249	1259	868
55°	839	876	940	989	999	752
65°	552	594	670	726	739	549
75°	280	334	420	478	491	296
85°	57	106	132	128	128	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1866.5	1866.5	1866.5	1866.5	1866.5
2.5°	1868.2	1868.2	1859.7	1868.2	1869.9
5°	1858.1	1861.4	1853.0	1863.1	1864.8
7.5°	1847.9	1847.9	1842.9	1853.0	1854.7
10°	1829.4	1831.1	1829.4	1841.2	1842.9
12.5°	1805.7	1809.1	1810.8	1822.6	1824.3
15°	1777.0	1782.1	1785.5	1800.7	1804.1
17.5°	1745.0	1750.0	1758.5	1775.4	1778.7
20°	1706.2	1712.9	1723.0	1745.0	1750.0
22.5°	1664.0	1670.7	1687.6	1707.9	1716.3
25°	1615.0	1628.5	1645.4	1672.4	1677.5
27.5°	1566.1	1577.9	1599.8	1628.5	1635.3
30°	1508.7	1527.3	1554.3	1583.0	1589.7
32.5°	1453.0	1471.6	1503.7	1534.0	1542.5
35°	1395.6	1412.5	1446.3	1481.7	1491.8
37.5°	1329.8	1351.8	1388.9	1424.3	1434.5
40°	1260.6	1287.6	1329.8	1367.0	1378.8
42.5°	1194.8	1223.5	1265.7	1306.2	1319.7
45°	1125.6	1152.6	1203.3	1248.8	1259.0
47.5°	1054.8	1085.1	1139.1	1184.7	1201.6
50°	983.9	1015.9	1073.3	1120.6	1130.7
52.5°	913.0	946.7	1007.5	1058.1	1063.2
55°	838.7	875.9	940.0	988.9	999.1
57.5°	771.2	803.3	872.5	923.1	934.9
60°	697.0	732.4	806.7	853.9	869.1
62.5°	626.1	663.2	740.9	788.1	801.6
65°	551.8	594.0	670.0	725.7	739.2
67.5°	487.7	528.2	609.2	663.2	676.7
70°	413.5	459.0	545.1	600.8	614.3
72.5°	349.3	396.6	482.7	536.7	556.9
75°	280.1	334.1	420.2	477.6	491.1
77.5°	212.6	275.1	362.8	406.7	406.7
80°	151.9	217.7	298.7	319.0	322.3
82.5°	99.6	163.7	221.1	219.4	219.4
85°	57.4	106.3	131.6	128.3	128.3
87.5°	21.9	43.9	47.3	47.3	45.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)