

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: P314470

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CA125-W2A-U-3000K**

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: P314470
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: 24FCZ2-65HE-UNV-L83050-S-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3000K 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

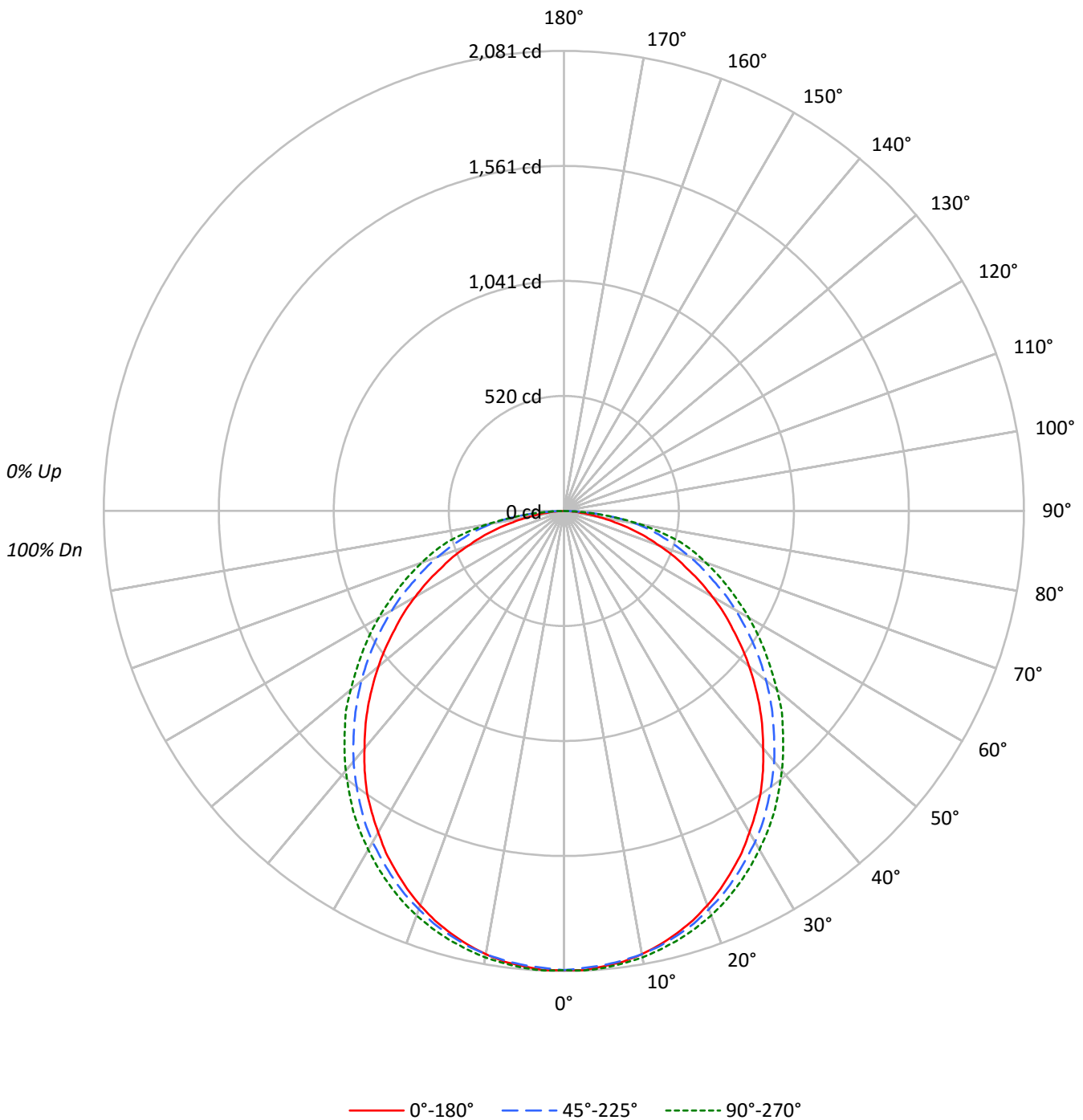
Lumens per Lamp: N/A
Luminaire Lumens: 5912.0 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 52.5
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°	2794	2794	2794
5°	2792	2785	2803
10°	2781	2781	2802
15°	2754	2768	2796
20°	2718	2745	2788
25°	2668	2718	2771
30°	2608	2687	2748
35°	2551	2643	2727
40°	2464	2599	2695
45°	2383	2548	2666
50°	2292	2500	2634
55°	2189	2454	2608
60°	2087	2415	2602
65°	1955	2373	2619
70°	1810	2386	2689
75°	1620	2431	2841
80°	1309	2576	2779
85°	985	2262	2203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	3.3
10°-20°	561.8	9.5
20°-30°	844.5	14.3
30°-40°	1006.0	17.0
40°-50°	1029.6	17.4
50°-60°	926.9	15.7
60°-70°	727.9	12.3
70°-80°	472.4	8.0
80°-90°	146.1	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°	1603.0	27.1
0°-40°	2609.0	44.1
0°-60°	4565.5	77.2
0°-90°	5912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5912.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2077	2077	2077	2077	2077	
5°	2068	2071	2062	2073	2075	196
15°	1977	1983	1987	2004	2007	558
25°	1797	1812	1831	1861	1867	828
35°	1553	1572	1609	1649	1660	969
45°	1252	1283	1339	1390	1401	966
55°	933	975	1046	1100	1112	837
65°	614	661	746	808	822	611
75°	312	372	468	531	546	330
85°	64	118	146	143	143	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2076.9	2076.9	2076.9	2076.9	2076.9
2.5°	2078.8	2078.8	2069.4	2078.8	2080.7
5°	2067.5	2071.3	2061.9	2073.2	2075.0
7.5°	2056.3	2056.3	2050.6	2061.9	2063.8
10°	2035.6	2037.5	2035.6	2048.8	2050.6
12.5°	2009.3	2013.1	2015.0	2028.1	2030.0
15°	1977.4	1983.0	1986.8	2003.7	2007.4
17.5°	1941.7	1947.4	1956.7	1975.5	1979.3
20°	1898.5	1906.0	1917.3	1941.7	1947.4
22.5°	1851.6	1859.1	1877.9	1900.4	1909.8
25°	1797.1	1812.1	1830.9	1861.0	1866.6
27.5°	1742.7	1755.8	1780.2	1812.1	1819.7
30°	1678.8	1699.5	1729.5	1761.4	1769.0
32.5°	1616.8	1637.5	1673.2	1707.0	1716.4
35°	1553.0	1571.8	1609.3	1648.8	1660.0
37.5°	1479.8	1504.2	1545.5	1584.9	1596.2
40°	1402.8	1432.8	1479.8	1521.1	1534.2
42.5°	1329.5	1361.5	1408.4	1453.5	1468.5
45°	1252.5	1282.6	1338.9	1389.6	1400.9
47.5°	1173.7	1207.5	1267.6	1318.3	1337.0
50°	1094.8	1130.5	1194.3	1246.9	1258.2
52.5°	1015.9	1053.5	1121.1	1177.4	1183.1
55°	933.3	974.6	1046.0	1100.4	1111.7
57.5°	858.2	893.9	970.9	1027.2	1040.3
60°	775.6	815.0	897.6	950.2	967.1
62.5°	696.7	738.0	824.4	877.0	892.0
65°	614.1	661.0	745.5	807.5	822.5
67.5°	542.7	587.8	677.9	738.0	753.0
70°	460.1	510.8	606.6	668.5	683.5
72.5°	388.7	441.3	537.1	597.2	619.7
75°	311.7	371.8	467.6	531.4	546.5
77.5°	236.6	306.1	403.7	452.6	452.6
80°	169.0	242.2	332.4	354.9	358.7
82.5°	110.8	182.2	246.0	244.1	244.1
85°	63.8	118.3	146.5	142.7	142.7
87.5°	24.4	48.8	52.6	52.6	50.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)