

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: P311715

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-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: P311715
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-L82765-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: 5907.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

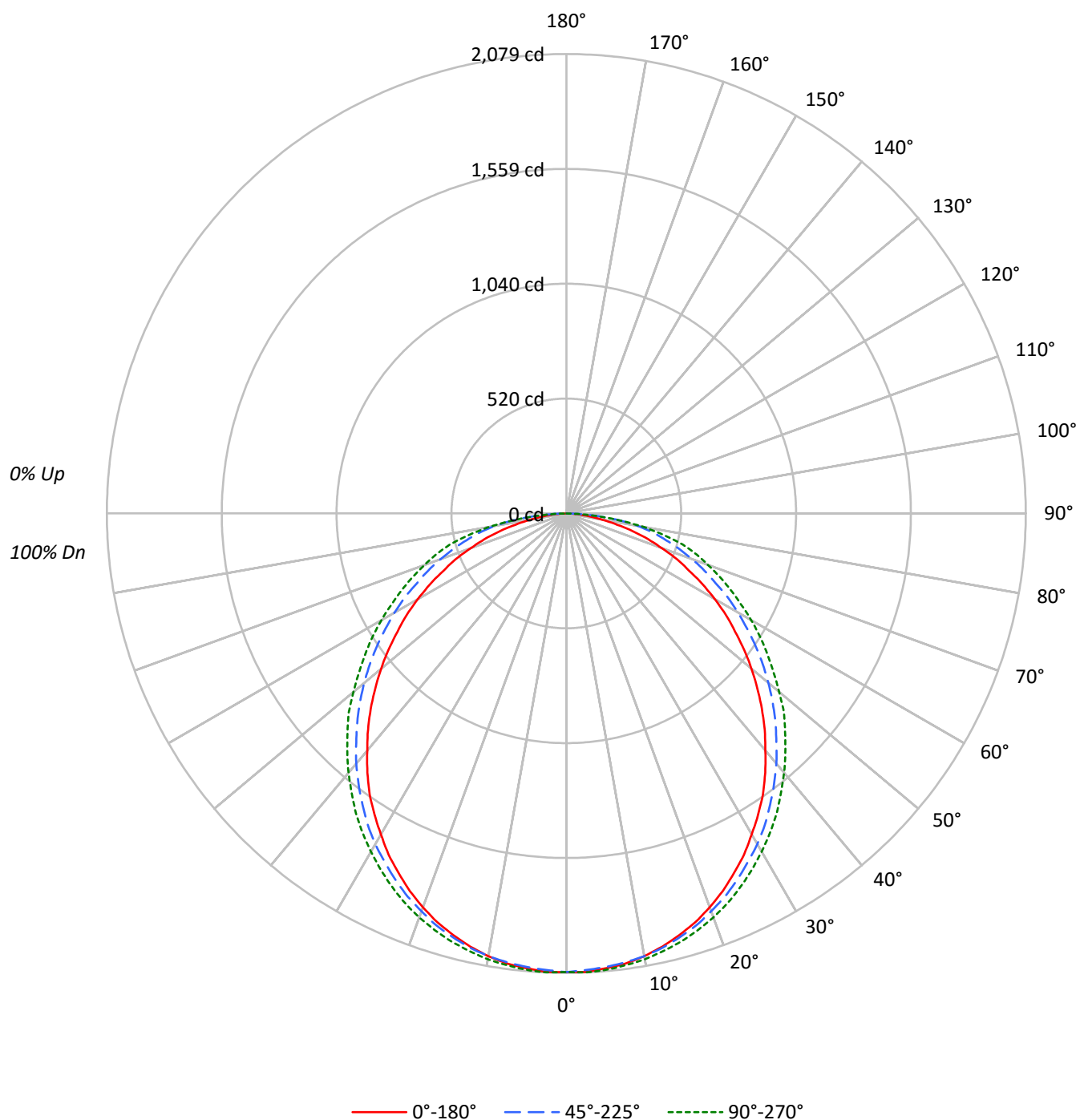
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2792	2792	2792
5°	2790	2783	2800
10°	2779	2779	2799
15°	2752	2765	2794
20°	2716	2743	2786
25°	2666	2716	2769
30°	2606	2685	2746
35°	2549	2641	2724
40°	2462	2597	2692
45°	2381	2546	2663
50°	2290	2498	2631
55°	2187	2452	2606
60°	2085	2414	2600
65°	1953	2372	2616
70°	1808	2384	2687
75°	1619	2429	2838
80°	1309	2573	2777
85°	985	2259	2201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.5	3.3
10°-20°	561.4	9.5
20°-30°	843.8	14.3
30°-40°	1005.1	17.0
40°-50°	1028.7	17.4
50°-60°	926.1	15.7
60°-70°	727.3	12.3
70°-80°	472.0	8.0
80°-90°	146.0	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°	1601.6	27.1
0°-40°	2606.8	44.1
0°-60°	4561.6	77.2
0°-90°	5907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2075	2075	2075	2075	2075	
5°	2066	2070	2060	2071	2073	196
15°	1976	1981	1985	2002	2006	557
25°	1796	1811	1829	1859	1865	827
35°	1552	1570	1608	1647	1659	968
45°	1252	1282	1338	1388	1400	965
55°	932	974	1045	1100	1111	836
65°	614	660	745	807	822	611
75°	312	372	467	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°	2075.2	2075.2	2075.2	2075.2	2075.2
2.5°	2077.0	2077.0	2067.7	2077.0	2078.9
5°	2065.8	2069.5	2060.2	2071.4	2073.3
7.5°	2054.5	2054.5	2048.9	2060.2	2062.0
10°	2033.9	2035.8	2033.9	2047.0	2048.9
12.5°	2007.6	2011.4	2013.3	2026.4	2028.3
15°	1975.7	1981.4	1985.1	2002.0	2005.7
17.5°	1940.1	1945.7	1955.1	1973.8	1977.6
20°	1896.9	1904.4	1915.7	1940.1	1945.7
22.5°	1850.0	1857.5	1876.3	1898.8	1908.2
25°	1795.6	1810.6	1829.4	1859.4	1865.0
27.5°	1741.2	1754.3	1778.7	1810.6	1818.1
30°	1677.4	1698.0	1728.1	1760.0	1767.5
32.5°	1615.5	1636.1	1671.8	1705.5	1714.9
35°	1551.7	1570.4	1608.0	1647.4	1658.6
37.5°	1478.5	1502.9	1544.2	1583.6	1594.8
40°	1401.6	1431.6	1478.5	1519.8	1532.9
42.5°	1328.4	1360.3	1407.2	1452.2	1467.3
45°	1251.5	1281.5	1337.8	1388.4	1399.7
47.5°	1172.7	1206.4	1266.5	1317.1	1335.9
50°	1093.9	1129.5	1193.3	1245.9	1257.1
52.5°	1015.1	1052.6	1120.1	1176.4	1182.1
55°	932.5	973.8	1045.1	1099.5	1110.8
57.5°	857.5	893.1	970.0	1026.3	1039.5
60°	774.9	814.3	896.9	949.4	966.3
62.5°	696.1	737.4	823.7	876.2	891.2
65°	613.5	660.5	744.9	806.8	821.8
67.5°	542.2	587.3	677.3	737.4	752.4
70°	459.7	510.3	606.0	668.0	683.0
72.5°	388.4	440.9	536.6	596.7	619.2
75°	311.5	371.5	467.2	531.0	546.0
77.5°	236.4	305.8	403.4	452.2	452.2
80°	168.9	242.0	332.1	354.6	358.4
82.5°	110.7	182.0	245.8	243.9	243.9
85°	63.8	118.2	146.3	142.6	142.6
87.5°	24.4	48.8	52.5	52.5	50.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)