

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: P314095

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-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: P314095
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: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 5627.0 lumens
Efficiency: N/A
Efficacy: 107.2 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

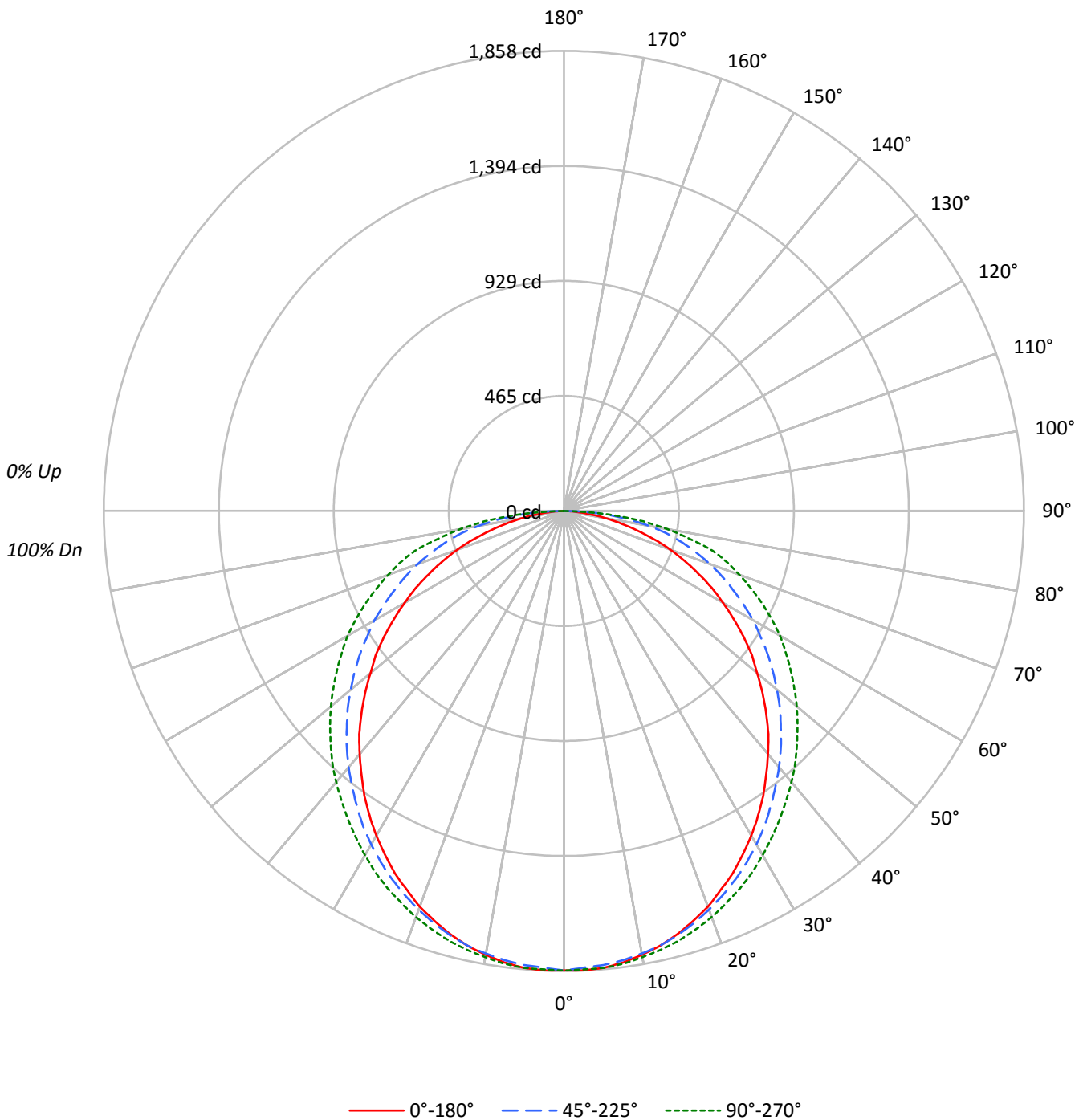
Input Watts (W): 52.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314095

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P314095

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3000K

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°	2497	2497	2497
5°	2501	2486	2501
10°	2487	2479	2500
15°	2465	2471	2502
20°	2435	2454	2499
25°	2397	2436	2497
30°	2352	2416	2495
35°	2306	2392	2496
40°	2253	2374	2512
45°	2199	2359	2533
50°	2134	2353	2571
55°	2080	2356	2623
60°	1999	2376	2713
65°	1908	2401	2812
70°	1807	2475	2967
75°	1611	2582	3242
80°	1375	2734	3312
85°	980	2709	3171



TEST NUMBER: P314095

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.6	3.1
10°-20°	502.2	8.9
20°-30°	758.5	13.5
30°-40°	914.2	16.2
40°-50°	959.7	17.1
50°-60°	897.9	16.0
60°-70°	741.5	13.2
70°-80°	505.2	9.0
80°-90°	172.3	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°	1436.3	25.5
0°-40°	2350.4	41.8
0°-60°	4208.0	74.8
0°-90°	5627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1856	1856	1856	1856	1856	
5°	1852	1850	1841	1852	1852	176
15°	1770	1772	1774	1792	1796	499
25°	1615	1622	1641	1673	1682	743
35°	1404	1419	1456	1505	1520	877
45°	1156	1180	1240	1307	1331	891
55°	887	922	1004	1087	1118	792
65°	599	650	754	850	883	594
75°	310	381	497	590	624	330
85°	64	125	176	198	205	79
90°	0	0	0	0	0	



TEST NUMBER: P314095

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1855.7	1855.7	1855.7	1855.7	1855.7
2.5°	1857.6	1855.7	1846.4	1855.7	1853.9
5°	1852.0	1850.1	1840.8	1852.0	1852.0
7.5°	1838.9	1838.9	1829.6	1842.7	1844.5
10°	1820.3	1820.3	1814.7	1829.6	1829.6
12.5°	1797.9	1797.9	1797.9	1812.8	1814.7
15°	1769.9	1771.7	1773.6	1792.3	1796.0
17.5°	1736.3	1740.0	1745.6	1768.0	1771.7
20°	1700.8	1704.5	1713.8	1740.0	1745.6
22.5°	1656.0	1665.3	1678.4	1708.2	1713.8
25°	1614.9	1622.4	1641.0	1672.8	1682.1
27.5°	1564.5	1575.7	1600.0	1633.6	1646.6
30°	1514.1	1525.3	1555.2	1594.4	1605.6
32.5°	1459.9	1476.7	1508.5	1549.6	1562.6
35°	1403.9	1418.9	1456.2	1504.8	1519.7
37.5°	1342.3	1362.9	1403.9	1456.2	1474.9
40°	1282.6	1305.0	1351.7	1407.7	1430.1
42.5°	1222.8	1245.2	1297.5	1361.0	1383.4
45°	1155.6	1179.9	1239.6	1306.9	1331.1
47.5°	1088.4	1118.3	1183.6	1254.6	1280.7
50°	1019.3	1053.0	1123.9	1198.6	1228.4
52.5°	957.7	989.5	1064.2	1144.4	1172.4
55°	886.8	922.3	1004.4	1086.6	1118.3
57.5°	814.0	853.2	940.9	1030.5	1062.3
60°	743.0	786.0	883.1	972.7	1008.1
62.5°	674.0	716.9	817.7	911.1	946.5
65°	599.3	649.7	754.2	849.5	883.1
67.5°	528.3	582.5	692.6	786.0	819.6
70°	459.3	511.5	629.2	720.6	754.2
72.5°	384.6	444.3	561.9	657.2	692.6
75°	309.9	380.9	496.6	590.0	623.6
77.5°	240.8	313.6	429.4	505.9	522.7
80°	177.4	252.0	352.9	407.0	427.5
82.5°	113.9	188.6	268.8	308.0	324.8
85°	63.5	125.1	175.5	197.9	205.4
87.5°	26.1	54.1	70.9	80.3	80.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)