

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: P314113

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-CP250-W2A-U-4500K**

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: P314113
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 4500K 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: 5879.0 lumens
Efficiency: N/A
Efficacy: 106.5 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

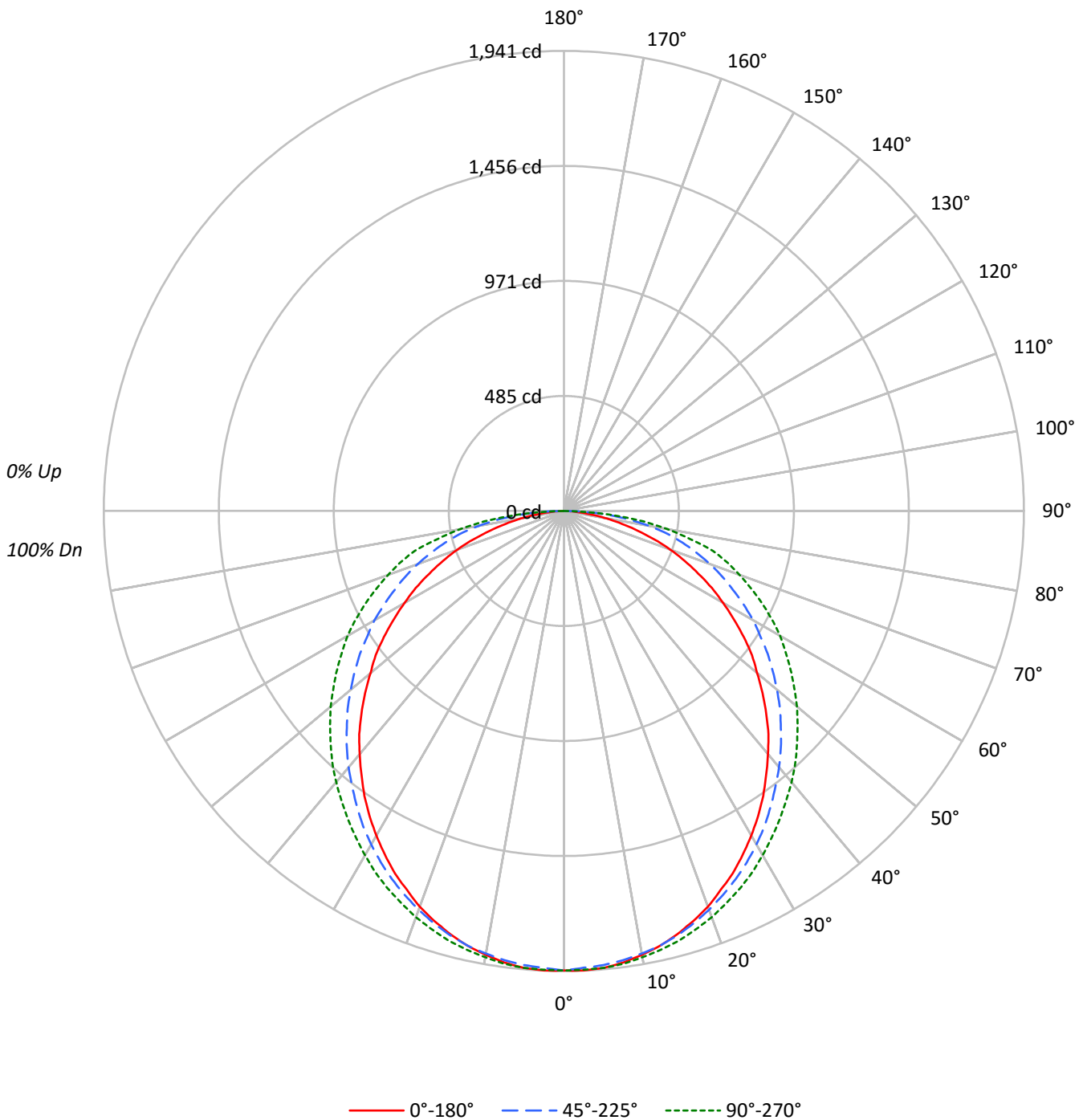
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314113

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CP250-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P314113

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CP250-W2A-U-4500K

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°	2609	2609	2609
5°	2613	2598	2613
10°	2598	2590	2612
15°	2576	2581	2614
20°	2544	2564	2611
25°	2505	2545	2609
30°	2458	2524	2606
35°	2409	2499	2608
40°	2354	2480	2624
45°	2297	2465	2646
50°	2229	2458	2687
55°	2173	2462	2741
60°	2089	2483	2834
65°	1993	2509	2937
70°	1888	2586	3100
75°	1683	2697	3387
80°	1436	2857	3461
85°	1024	2831	3313



TEST NUMBER: P314113

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CP250-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.5	3.1
10°-20°	524.7	8.9
20°-30°	792.5	13.5
30°-40°	955.1	16.2
40°-50°	1002.7	17.1
50°-60°	938.1	16.0
60°-70°	774.7	13.2
70°-80°	527.9	9.0
80°-90°	180.0	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°	1500.6	25.5
0°-40°	2455.7	41.8
0°-60°	4396.4	74.8
0°-90°	5879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5879.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1939	1939	1939	1939	1939	
5°	1935	1933	1923	1935	1935	184
15°	1849	1851	1853	1872	1876	521
25°	1687	1695	1714	1748	1757	776
35°	1467	1482	1521	1572	1588	917
45°	1207	1233	1295	1365	1391	931
55°	926	964	1049	1135	1168	827
65°	626	679	788	888	923	621
75°	324	398	519	616	652	345
85°	66	131	183	207	215	83
90°	0	0	0	0	0	



TEST NUMBER: P314113

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CP250-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1938.8	1938.8	1938.8	1938.8	1938.8
2.5°	1940.8	1938.8	1929.1	1938.8	1936.9
5°	1934.9	1933.0	1923.2	1934.9	1934.9
7.5°	1921.3	1921.3	1911.5	1925.2	1927.1
10°	1901.8	1901.8	1895.9	1911.5	1911.5
12.5°	1878.4	1878.4	1878.4	1894.0	1895.9
15°	1849.1	1851.1	1853.0	1872.5	1876.4
17.5°	1814.0	1817.9	1823.8	1847.2	1851.1
20°	1776.9	1780.8	1790.6	1817.9	1823.8
22.5°	1730.1	1739.9	1753.5	1784.7	1790.6
25°	1687.2	1695.0	1714.5	1747.7	1757.4
27.5°	1634.6	1646.3	1671.6	1706.7	1720.4
30°	1581.9	1593.6	1624.8	1665.8	1677.5
32.5°	1525.3	1542.9	1576.0	1619.0	1632.6
35°	1466.8	1482.4	1521.4	1572.1	1587.7
37.5°	1402.4	1423.9	1466.8	1521.4	1540.9
40°	1340.0	1363.4	1412.2	1470.7	1494.1
42.5°	1277.6	1301.0	1355.6	1421.9	1445.4
45°	1207.4	1232.7	1295.2	1365.4	1390.7
47.5°	1137.2	1168.4	1236.6	1310.8	1338.1
50°	1065.0	1100.1	1174.2	1252.3	1283.5
52.5°	1000.6	1033.8	1111.8	1195.7	1224.9
55°	926.5	963.6	1049.4	1135.2	1168.4
57.5°	850.4	891.4	983.1	1076.7	1109.9
60°	776.3	821.2	922.6	1016.2	1053.3
62.5°	704.1	749.0	854.3	951.9	988.9
65°	626.1	678.8	788.0	887.5	922.6
67.5°	552.0	608.6	723.7	821.2	856.3
70°	479.8	534.4	657.3	752.9	788.0
72.5°	401.8	464.2	587.1	686.6	723.7
75°	323.8	397.9	518.8	616.4	651.5
77.5°	251.6	327.7	448.6	528.6	546.2
80°	185.3	263.3	368.7	425.2	446.7
82.5°	119.0	197.0	280.9	321.8	339.4
85°	66.3	130.7	183.4	206.8	214.6
87.5°	27.3	56.6	74.1	83.9	83.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)