

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: P314486

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CP250-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: P314486  
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-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 5827.0 lumens  
Efficiency: N/A  
Efficacy: 110.8 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

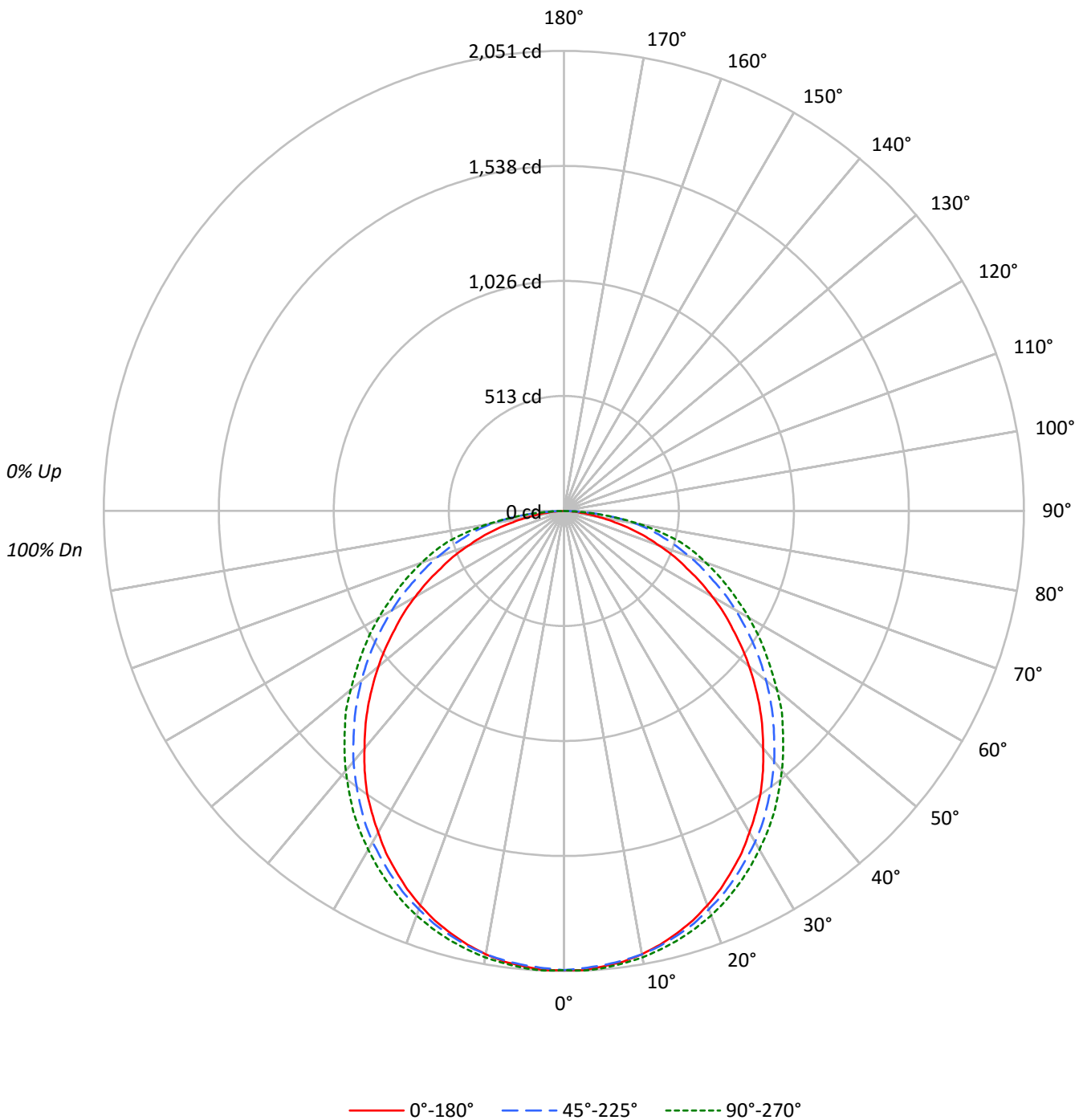
Input Watts (W): 52.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2754	2754	2754
5°	2752	2745	2762
10°	2741	2741	2761
15°	2715	2728	2756
20°	2679	2706	2748
25°	2630	2679	2731
30°	2571	2648	2709
35°	2514	2605	2688
40°	2428	2562	2656
45°	2349	2511	2627
50°	2259	2464	2596
55°	2158	2418	2570
60°	2057	2381	2565
65°	1927	2339	2581
70°	1784	2352	2650
75°	1597	2396	2800
80°	1291	2538	2739
85°	971	2229	2172



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	193.8	3.3
10°-20°	553.7	9.5
20°-30°	832.4	14.3
30°-40°	991.5	17.0
40°-50°	1014.8	17.4
50°-60°	913.6	15.7
60°-70°	717.5	12.3
70°-80°	465.7	8.0
80°-90°	144.0	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°	1580.0	27.1
0°-40°	2571.5	44.1
0°-60°	4499.9	77.2
0°-90°	5827.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5827.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2047	2047	2047	2047	2047	
5°	2038	2042	2032	2043	2045	194
15°	1949	1954	1958	1975	1979	550
25°	1771	1786	1805	1834	1840	816
35°	1531	1549	1586	1625	1636	955
45°	1234	1264	1320	1370	1381	952
55°	920	961	1031	1085	1096	825
65°	605	652	735	796	811	602
75°	307	366	461	524	539	325
85°	63	117	144	141	141	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2047.1	2047.1	2047.1	2047.1	2047.1
2.5°	2048.9	2048.9	2039.7	2048.9	2050.8
5°	2037.8	2041.5	2032.3	2043.4	2045.2
7.5°	2026.7	2026.7	2021.2	2032.3	2034.1
10°	2006.3	2008.2	2006.3	2019.3	2021.2
12.5°	1980.4	1984.1	1986.0	1998.9	2000.8
15°	1949.0	1954.5	1958.2	1974.9	1978.6
17.5°	1913.8	1919.4	1928.6	1947.1	1950.8
20°	1871.2	1878.6	1889.7	1913.8	1919.4
22.5°	1825.0	1832.4	1850.9	1873.1	1882.3
25°	1771.3	1786.1	1804.6	1834.2	1839.8
27.5°	1717.6	1730.6	1754.6	1786.1	1793.5
30°	1654.7	1675.0	1704.7	1736.1	1743.5
32.5°	1593.6	1614.0	1649.1	1682.4	1691.7
35°	1530.7	1549.2	1586.2	1625.1	1636.2
37.5°	1458.5	1482.5	1523.3	1562.1	1573.2
40°	1382.6	1412.2	1458.5	1499.2	1512.2
42.5°	1310.4	1341.9	1388.2	1432.6	1447.4
45°	1234.5	1264.1	1319.7	1369.6	1380.7
47.5°	1156.8	1190.1	1249.3	1299.3	1317.8
50°	1079.1	1114.2	1177.2	1229.0	1240.1
52.5°	1001.3	1038.3	1105.0	1160.5	1166.0
55°	919.9	960.6	1030.9	1084.6	1095.7
57.5°	845.8	881.0	956.9	1012.4	1025.4
60°	764.4	803.3	884.7	936.5	953.2
62.5°	686.7	727.4	812.5	864.4	879.2
65°	605.2	651.5	734.8	795.9	810.7
67.5°	534.9	579.3	668.2	727.4	742.2
70°	453.5	503.4	597.8	658.9	673.7
72.5°	383.1	435.0	529.3	588.6	610.8
75°	307.2	366.5	460.9	523.8	538.6
77.5°	233.2	301.7	397.9	446.1	446.1
80°	166.6	238.8	327.6	349.8	353.5
82.5°	109.2	179.5	242.5	240.6	240.6
85°	62.9	116.6	144.4	140.7	140.7
87.5°	24.1	48.1	51.8	51.8	50.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)