

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: P311053

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP125-W2A-U-5000K**

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: P311053  
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-L82765-CP125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 5000K 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**

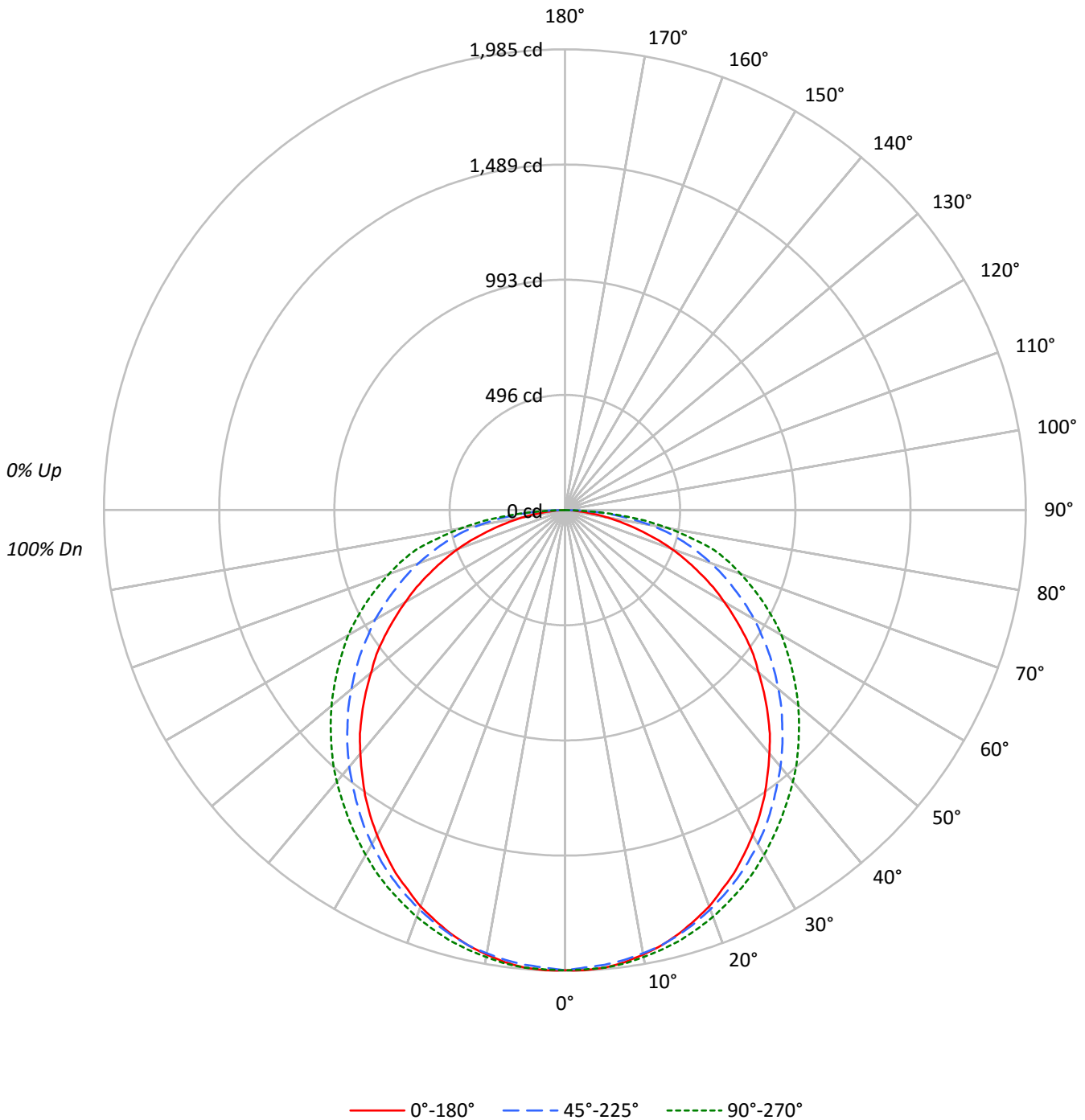
Lumens per Lamp: N/A  
Luminaire Lumens: 6012.0 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2668	2668	2668
5°	2672	2656	2672
10°	2657	2649	2671
15°	2634	2640	2673
20°	2602	2622	2670
25°	2561	2603	2668
30°	2513	2582	2665
35°	2464	2555	2667
40°	2407	2536	2684
45°	2349	2520	2706
50°	2280	2514	2747
55°	2223	2517	2803
60°	2136	2539	2898
65°	2039	2565	3004
70°	1930	2644	3170
75°	1721	2758	3463
80°	1468	2921	3539
85°	1047	2895	3387



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.6	3.1
10°-20°	536.5	8.9
20°-30°	810.4	13.5
30°-40°	976.7	16.2
40°-50°	1025.4	17.1
50°-60°	959.3	16.0
60°-70°	792.2	13.2
70°-80°	539.8	9.0
80°-90°	184.1	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°	1534.5	25.5
0°-40°	2511.2	41.8
0°-60°	4495.9	74.8
0°-90°	6012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6012.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1983	1983	1983	1983	1983	
5°	1979	1977	1967	1979	1979	188
15°	1891	1893	1895	1915	1919	533
25°	1725	1733	1753	1787	1797	794
35°	1500	1516	1556	1608	1624	937
45°	1235	1261	1324	1396	1422	952
55°	948	985	1073	1161	1195	846
65°	640	694	806	908	944	635
75°	331	407	531	630	666	353
85°	68	134	188	211	219	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1982.7	1982.7	1982.7	1982.7	1982.7
2.5°	1984.7	1982.7	1972.7	1982.7	1980.7
5°	1978.7	1976.7	1966.7	1978.7	1978.7
7.5°	1964.8	1964.8	1954.8	1968.7	1970.7
10°	1944.8	1944.8	1938.8	1954.8	1954.8
12.5°	1920.9	1920.9	1920.9	1936.8	1938.8
15°	1891.0	1892.9	1894.9	1914.9	1918.9
17.5°	1855.0	1859.0	1865.0	1889.0	1892.9
20°	1817.1	1821.1	1831.1	1859.0	1865.0
22.5°	1769.3	1779.2	1793.2	1825.1	1831.1
25°	1725.4	1733.4	1753.3	1787.2	1797.2
27.5°	1671.5	1683.5	1709.4	1745.3	1759.3
30°	1617.7	1629.6	1661.6	1703.5	1715.4
32.5°	1559.8	1577.8	1611.7	1655.6	1669.5
35°	1500.0	1516.0	1555.8	1607.7	1623.7
37.5°	1434.2	1456.1	1500.0	1555.8	1575.8
40°	1370.3	1394.3	1444.1	1504.0	1527.9
42.5°	1306.5	1330.4	1386.3	1454.1	1478.1
45°	1234.7	1260.6	1324.5	1396.3	1422.2
47.5°	1162.9	1194.8	1264.6	1340.4	1368.3
50°	1089.1	1125.0	1200.8	1280.6	1312.5
52.5°	1023.3	1057.2	1137.0	1222.7	1252.7
55°	947.5	985.4	1073.1	1160.9	1194.8
57.5°	869.7	911.6	1005.3	1101.1	1135.0
60°	793.9	839.8	943.5	1039.2	1077.1
62.5°	720.1	766.0	873.7	973.4	1011.3
65°	640.3	694.1	805.8	907.6	943.5
67.5°	564.5	622.3	740.0	839.8	875.7
70°	490.7	546.5	672.2	769.9	805.8
72.5°	410.9	474.7	600.4	702.1	740.0
75°	331.1	406.9	530.6	630.3	666.2
77.5°	257.3	335.1	458.8	540.6	558.5
80°	189.5	269.3	377.0	434.8	456.8
82.5°	121.7	201.5	287.2	329.1	347.1
85°	67.8	133.6	187.5	211.4	219.4
87.5°	27.9	57.8	75.8	85.8	85.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)