

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: P314322

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-S-CA125-W2A-U-4000K**

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: P314322  
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: 24FCZ2-45HE-UNV-L83050-S-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 4000K 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**

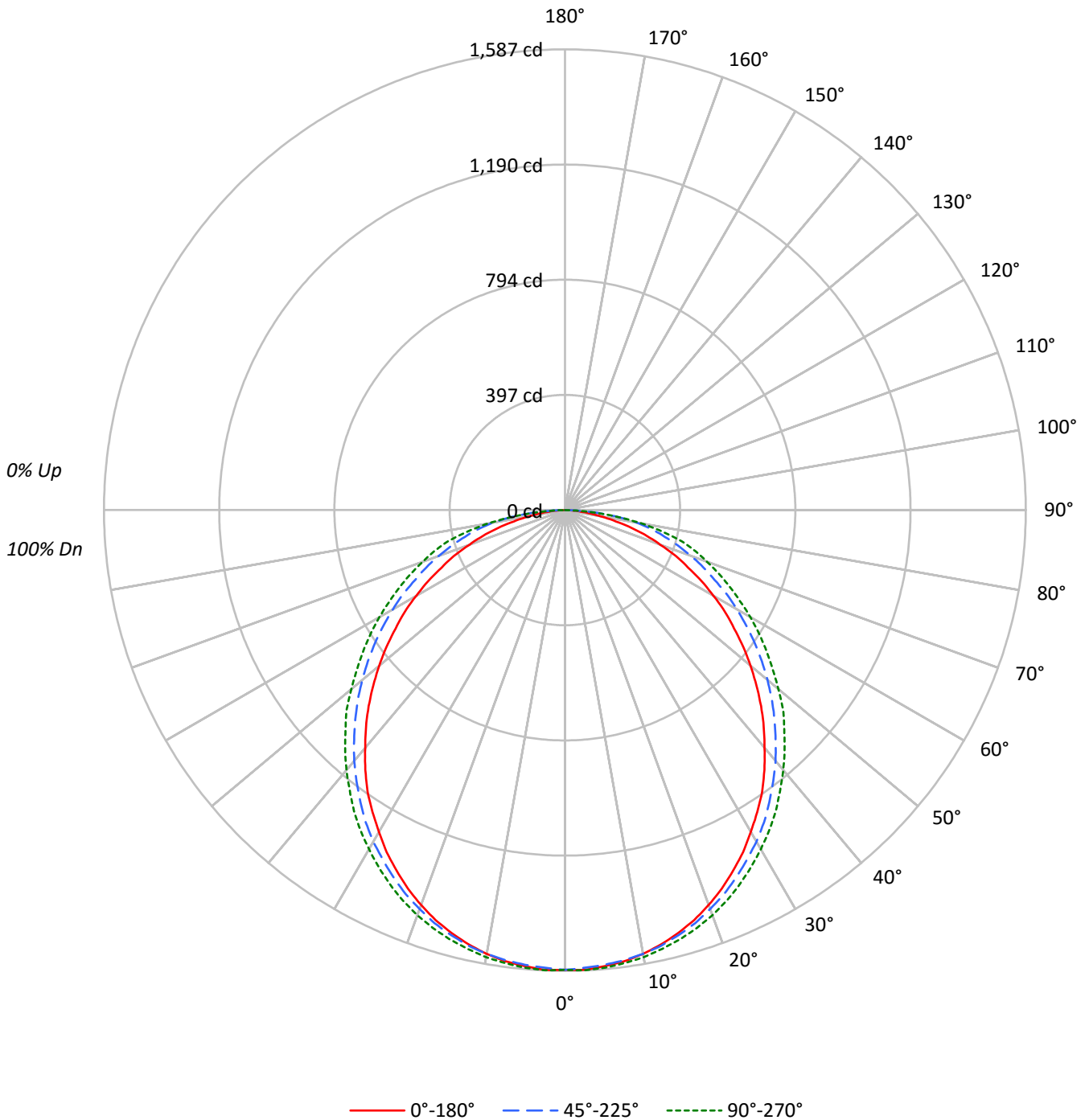
Lumens per Lamp: N/A  
Luminaire Lumens: 4508.0 lumens  
Efficiency: N/A  
Efficacy: 130.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2131	2131	2131
5°	2129	2123	2137
10°	2121	2121	2136
15°	2100	2110	2132
20°	2073	2093	2126
25°	2034	2073	2113
30°	1989	2049	2096
35°	1945	2016	2079
40°	1879	1982	2055
45°	1817	1943	2033
50°	1747	1906	2008
55°	1669	1871	1989
60°	1591	1842	1984
65°	1491	1810	1997
70°	1380	1819	2050
75°	1236	1853	2166
80°	999	1963	2119
85°	752	1724	1680



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.9	3.3
10°-20°	428.4	9.5
20°-30°	644.0	14.3
30°-40°	767.1	17.0
40°-50°	785.1	17.4
50°-60°	706.8	15.7
60°-70°	555.1	12.3
70°-80°	360.2	8.0
80°-90°	111.4	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°	1222.3	27.1
0°-40°	1989.4	44.1
0°-60°	3481.3	77.2
0°-90°	4508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4508.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1584	1584	1584	1584	1584	
5°	1576	1579	1572	1581	1582	150
15°	1508	1512	1515	1528	1531	425
25°	1370	1382	1396	1419	1423	631
35°	1184	1198	1227	1257	1266	739
45°	955	978	1021	1060	1068	736
55°	712	743	798	839	848	638
65°	468	504	568	616	627	466
75°	238	284	356	405	417	252
85°	49	90	112	109	109	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1583.7	1583.7	1583.7	1583.7	1583.7
2.5°	1585.1	1585.1	1578.0	1585.1	1586.6
5°	1576.5	1579.4	1572.2	1580.8	1582.3
7.5°	1567.9	1567.9	1563.6	1572.2	1573.7
10°	1552.2	1553.6	1552.2	1562.2	1563.6
12.5°	1532.1	1535.0	1536.4	1546.5	1547.9
15°	1507.8	1512.1	1515.0	1527.8	1530.7
17.5°	1480.6	1484.9	1492.0	1506.4	1509.2
20°	1447.7	1453.4	1462.0	1480.6	1484.9
22.5°	1411.9	1417.6	1431.9	1449.1	1456.3
25°	1370.3	1381.8	1396.1	1419.0	1423.3
27.5°	1328.8	1338.8	1357.4	1381.8	1387.5
30°	1280.1	1295.9	1318.8	1343.1	1348.9
32.5°	1232.9	1248.6	1275.8	1301.6	1308.8
35°	1184.2	1198.5	1227.1	1257.2	1265.8
37.5°	1128.3	1147.0	1178.5	1208.5	1217.1
40°	1069.6	1092.5	1128.3	1159.8	1169.9
42.5°	1013.8	1038.1	1073.9	1108.3	1119.8
45°	955.1	978.0	1021.0	1059.6	1068.2
47.5°	894.9	920.7	966.5	1005.2	1019.5
50°	834.8	862.0	910.7	950.8	959.4
52.5°	774.7	803.3	854.8	897.8	902.1
55°	711.7	743.2	797.6	839.1	847.7
57.5°	654.4	681.6	740.3	783.3	793.3
60°	591.4	621.4	684.5	724.5	737.4
62.5°	531.2	562.7	628.6	668.7	680.2
65°	468.2	504.0	568.5	615.7	627.2
67.5°	413.8	448.2	516.9	562.7	574.2
70°	350.8	389.5	462.5	509.8	521.2
72.5°	296.4	336.5	409.5	455.3	472.5
75°	237.7	283.5	356.5	405.2	416.7
77.5°	180.4	233.4	307.9	345.1	345.1
80°	128.9	184.7	253.4	270.6	273.5
82.5°	84.5	138.9	187.6	186.1	186.1
85°	48.7	90.2	111.7	108.8	108.8
87.5°	18.6	37.2	40.1	40.1	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)