

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: P314288

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-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: P314288  
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: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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**

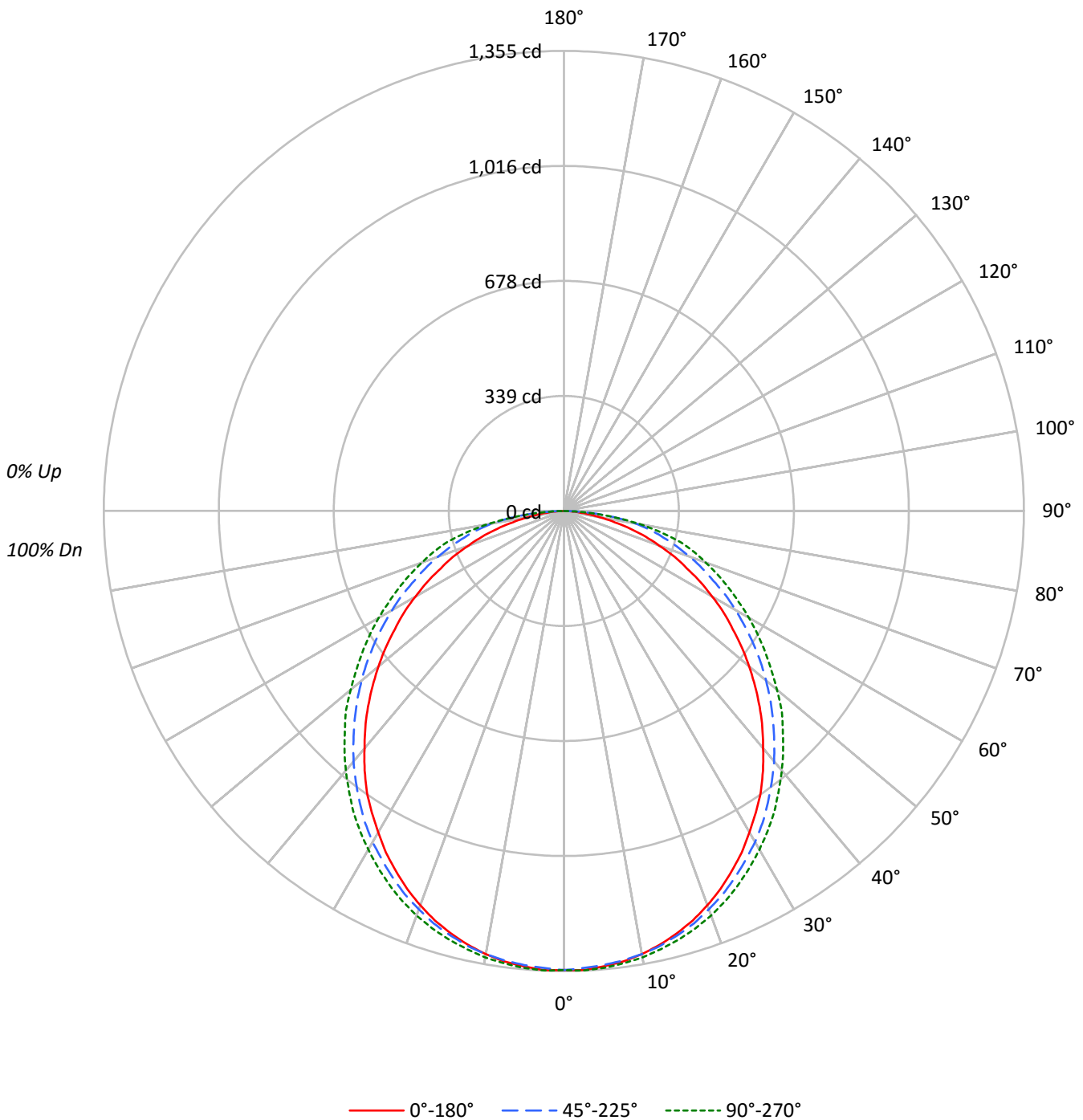
Lumens per Lamp: N/A  
Luminaire Lumens: 3849.0 lumens  
Efficiency: N/A  
Efficacy: 120.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1819	1819	1819
5°	1818	1813	1825
10°	1811	1811	1824
15°	1793	1802	1820
20°	1770	1787	1815
25°	1737	1770	1804
30°	1698	1749	1789
35°	1661	1721	1775
40°	1604	1692	1754
45°	1552	1659	1735
50°	1492	1628	1715
55°	1425	1597	1698
60°	1359	1573	1694
65°	1273	1545	1705
70°	1178	1554	1751
75°	1055	1582	1850
80°	852	1677	1809
85°	642	1473	1434



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.0	3.3
10°-20°	365.8	9.5
20°-30°	549.8	14.3
30°-40°	655.0	17.0
40°-50°	670.3	17.4
50°-60°	603.5	15.7
60°-70°	473.9	12.3
70°-80°	307.6	8.0
80°-90°	95.1	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°	1043.6	27.1
0°-40°	1698.6	44.1
0°-60°	2972.4	77.2
0°-90°	3849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3849.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1352	1352	1352	1352	1352	
5°	1346	1348	1342	1350	1351	128
15°	1287	1291	1294	1304	1307	363
25°	1170	1180	1192	1212	1215	539
35°	1011	1023	1048	1073	1081	631
45°	816	835	872	905	912	629
55°	608	634	681	716	724	545
65°	400	430	485	526	536	398
75°	203	242	304	346	356	215
85°	42	77	95	93	93	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1352.2	1352.2	1352.2	1352.2	1352.2
2.5°	1353.4	1353.4	1347.3	1353.4	1354.6
5°	1346.1	1348.5	1342.4	1349.7	1351.0
7.5°	1338.7	1338.7	1335.1	1342.4	1343.6
10°	1325.3	1326.5	1325.3	1333.8	1335.1
12.5°	1308.2	1310.6	1311.8	1320.4	1321.6
15°	1287.4	1291.0	1293.5	1304.5	1306.9
17.5°	1264.2	1267.8	1273.9	1286.2	1288.6
20°	1236.0	1240.9	1248.3	1264.2	1267.8
22.5°	1205.5	1210.4	1222.6	1237.3	1243.4
25°	1170.0	1179.8	1192.0	1211.6	1215.2
27.5°	1134.6	1143.1	1159.0	1179.8	1184.7
30°	1093.0	1106.4	1126.0	1146.8	1151.7
32.5°	1052.6	1066.1	1089.3	1111.3	1117.4
35°	1011.1	1023.3	1047.8	1073.4	1080.8
37.5°	963.4	979.3	1006.2	1031.9	1039.2
40°	913.3	932.8	963.4	990.3	998.9
42.5°	865.6	886.4	916.9	946.3	956.1
45°	815.5	835.0	871.7	904.7	912.0
47.5°	764.1	786.1	825.2	858.3	870.5
50°	712.8	736.0	777.6	811.8	819.1
52.5°	661.4	685.9	729.9	766.6	770.2
55°	607.6	634.5	681.0	716.4	723.8
57.5°	558.7	582.0	632.1	668.8	677.3
60°	504.9	530.6	584.4	618.6	629.6
62.5°	453.6	480.5	536.7	570.9	580.7
65°	399.8	430.3	485.4	525.7	535.5
67.5°	353.3	382.7	441.4	480.5	490.3
70°	299.5	332.5	394.9	435.2	445.0
72.5°	253.1	287.3	349.7	388.8	403.5
75°	202.9	242.1	304.4	346.0	355.8
77.5°	154.0	199.3	262.9	294.6	294.6
80°	110.0	157.7	216.4	231.1	233.5
82.5°	72.1	118.6	160.2	158.9	158.9
85°	41.6	77.0	95.4	92.9	92.9
87.5°	15.9	31.8	34.2	34.2	33.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)