

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: P314282

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CP187-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: P314282  
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-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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**

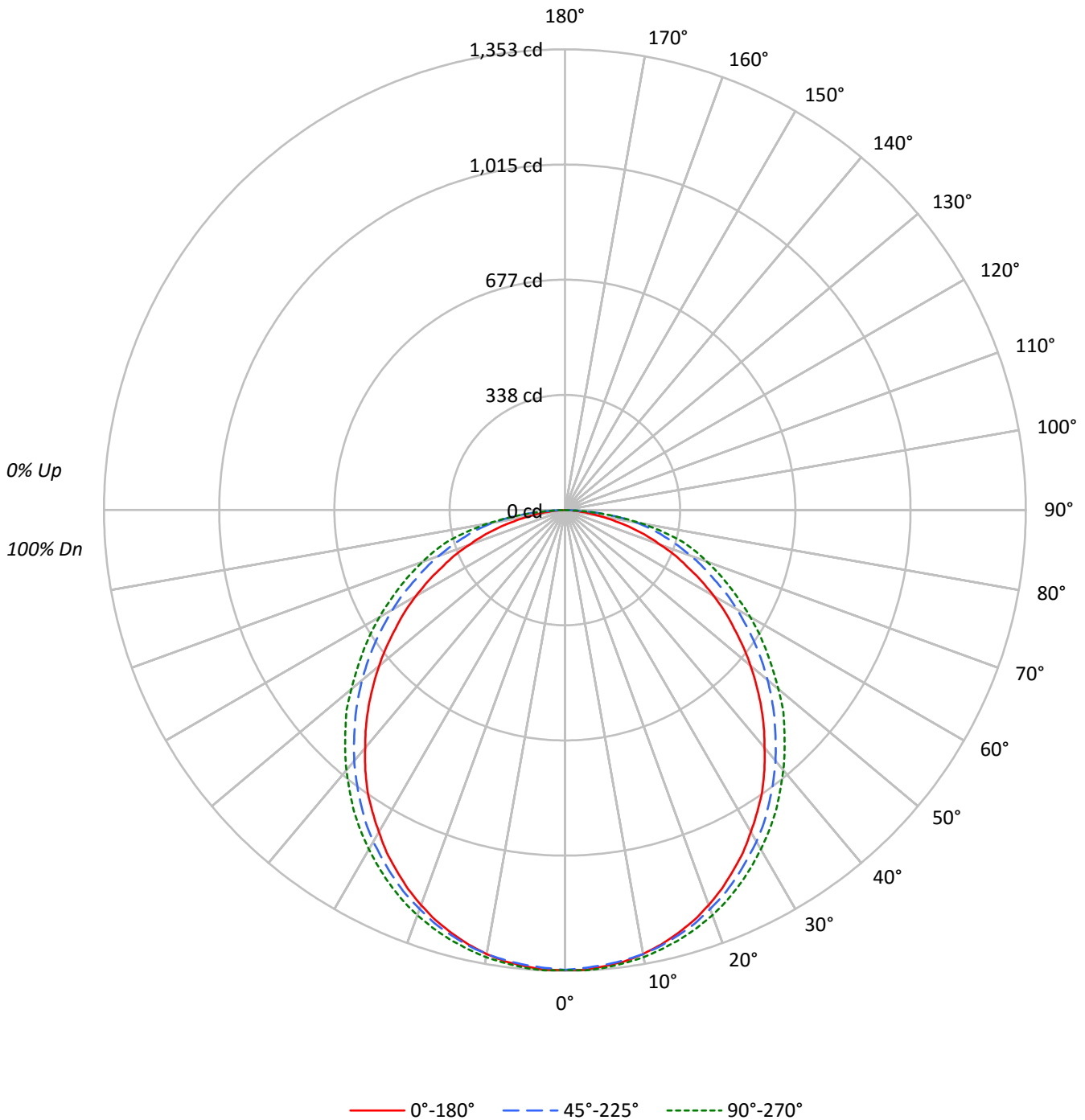
Lumens per Lamp: N/A  
Luminaire Lumens: 3844.0 lumens  
Efficiency: N/A  
Efficacy: 123.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1817	1817	1817
5°	1816	1811	1822
10°	1808	1808	1822
15°	1791	1799	1818
20°	1767	1785	1813
25°	1735	1767	1802
30°	1696	1747	1787
35°	1659	1719	1773
40°	1602	1690	1752
45°	1550	1657	1733
50°	1490	1626	1712
55°	1423	1595	1696
60°	1357	1570	1692
65°	1271	1543	1703
70°	1177	1552	1748
75°	1054	1580	1847
80°	852	1674	1807
85°	641	1470	1433



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.8	3.3
10°-20°	365.3	9.5
20°-30°	549.1	14.3
30°-40°	654.1	17.0
40°-50°	669.4	17.4
50°-60°	602.7	15.7
60°-70°	473.3	12.3
70°-80°	307.2	8.0
80°-90°	95.0	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°	1042.3	27.1
0°-40°	1696.4	44.1
0°-60°	2968.5	77.2
0°-90°	3844.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3844.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1344	1347	1341	1348	1349	128
15°	1286	1289	1292	1303	1305	363
25°	1168	1178	1190	1210	1214	538
35°	1010	1022	1046	1072	1079	630
45°	814	834	871	904	911	628
55°	607	634	680	716	723	544
65°	399	430	485	525	535	397
75°	203	242	304	346	355	214
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°	1350.4	1350.4	1350.4	1350.4	1350.4
2.5°	1351.6	1351.6	1345.5	1351.6	1352.9
5°	1344.3	1346.8	1340.7	1348.0	1349.2
7.5°	1337.0	1337.0	1333.3	1340.7	1341.9
10°	1323.6	1324.8	1323.6	1332.1	1333.3
12.5°	1306.5	1308.9	1310.1	1318.7	1319.9
15°	1285.7	1289.4	1291.8	1302.8	1305.2
17.5°	1262.5	1266.2	1272.3	1284.5	1286.9
20°	1234.4	1239.3	1246.6	1262.5	1266.2
22.5°	1203.9	1208.8	1221.0	1235.6	1241.8
25°	1168.5	1178.3	1190.5	1210.0	1213.7
27.5°	1133.1	1141.6	1157.5	1178.3	1183.1
30°	1091.6	1105.0	1124.5	1145.3	1150.2
32.5°	1051.3	1064.7	1087.9	1109.9	1116.0
35°	1009.8	1022.0	1046.4	1072.0	1079.4
37.5°	962.1	978.0	1004.9	1030.5	1037.8
40°	912.1	931.6	962.1	989.0	997.6
42.5°	864.5	885.2	915.7	945.1	954.8
45°	814.4	833.9	870.6	903.5	910.9
47.5°	763.1	785.1	824.2	857.1	869.3
50°	711.8	735.0	776.6	810.7	818.1
52.5°	660.6	685.0	728.9	765.6	769.2
55°	606.8	633.7	680.1	715.5	722.8
57.5°	558.0	581.2	631.3	667.9	676.4
60°	504.3	529.9	583.6	617.8	628.8
62.5°	453.0	479.9	536.0	570.2	580.0
65°	399.3	429.8	484.7	525.0	534.8
67.5°	352.9	382.2	440.8	479.9	489.6
70°	299.1	332.1	394.4	434.7	444.4
72.5°	252.7	286.9	349.2	388.3	402.9
75°	202.7	241.8	304.0	345.5	355.3
77.5°	153.8	199.0	262.5	294.3	294.3
80°	109.9	157.5	216.1	230.8	233.2
82.5°	72.0	118.4	160.0	158.7	158.7
85°	41.5	76.9	95.2	92.8	92.8
87.5°	15.9	31.7	34.2	34.2	33.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)