

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: P314291

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CA08-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: P314291  
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: 24FCZ2-40-UNV-L83050-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 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: 3889.0 lumens  
Efficiency: N/A  
Efficacy: 118.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

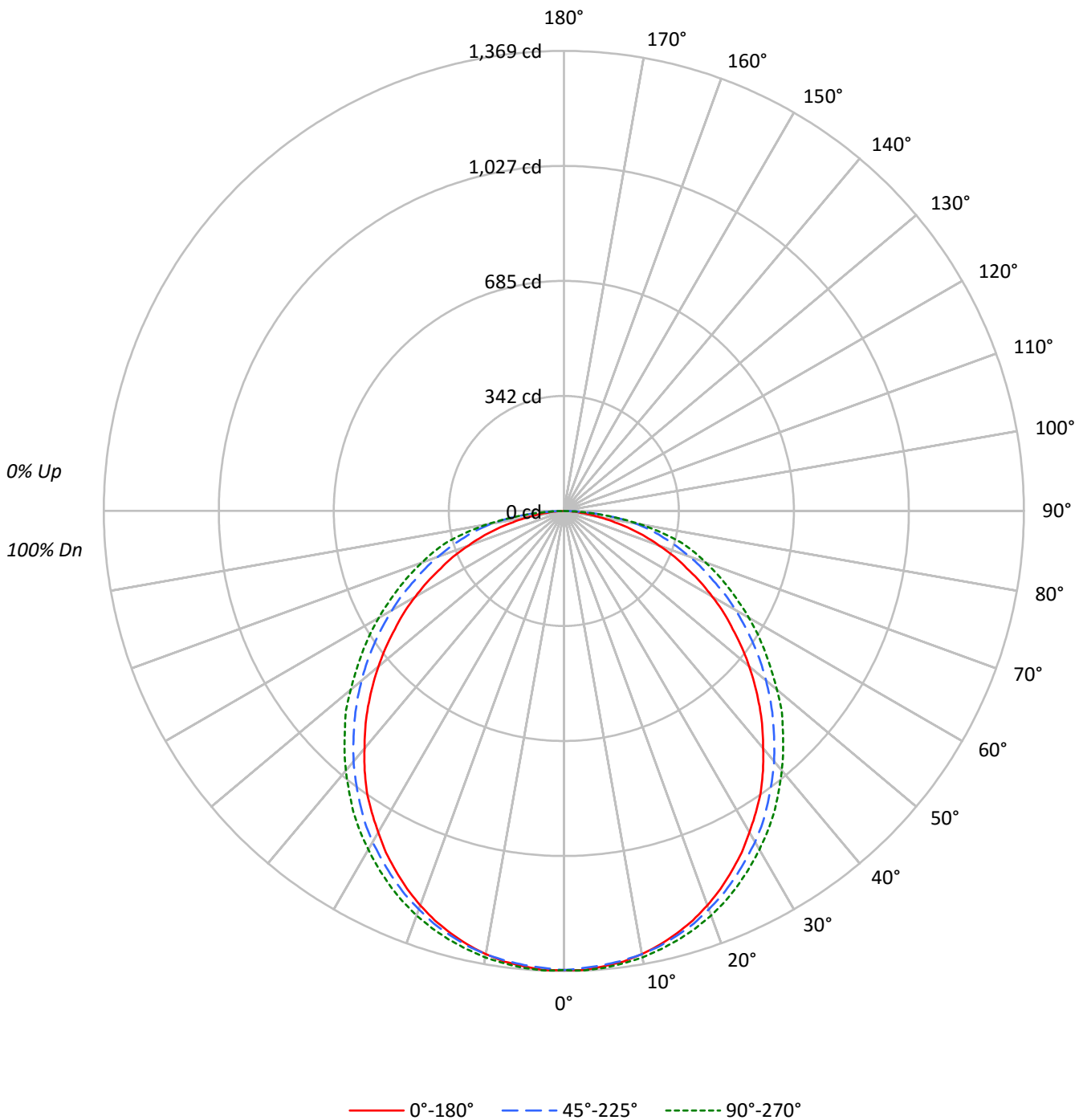
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1838	1838	1838
5°	1837	1832	1844
10°	1830	1830	1843
15°	1812	1820	1839
20°	1788	1806	1834
25°	1755	1788	1823
30°	1716	1768	1808
35°	1678	1739	1794
40°	1621	1710	1773
45°	1568	1676	1753
50°	1508	1644	1732
55°	1440	1614	1715
60°	1373	1589	1712
65°	1286	1561	1723
70°	1190	1570	1769
75°	1066	1599	1869
80°	862	1694	1828
85°	648	1488	1450



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.3	3.3
10°-20°	369.6	9.5
20°-30°	555.6	14.3
30°-40°	661.8	17.0
40°-50°	677.3	17.4
50°-60°	609.7	15.7
60°-70°	478.9	12.3
70°-80°	310.8	8.0
80°-90°	96.1	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°	1054.5	27.1
0°-40°	1716.2	44.1
0°-60°	3003.3	77.2
0°-90°	3889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3889.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1366	1366	1366	1366	1366	
5°	1360	1362	1356	1364	1365	129
15°	1301	1304	1307	1318	1320	367
25°	1182	1192	1204	1224	1228	545
35°	1022	1034	1059	1085	1092	637
45°	824	844	881	914	922	635
55°	614	641	688	724	731	550
65°	404	435	490	531	541	402
75°	205	245	308	350	360	217
85°	42	78	96	94	94	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1366.2	1366.2	1366.2	1366.2	1366.2
2.5°	1367.5	1367.5	1361.3	1367.5	1368.7
5°	1360.1	1362.5	1356.3	1363.8	1365.0
7.5°	1352.6	1352.6	1348.9	1356.3	1357.6
10°	1339.1	1340.3	1339.1	1347.7	1348.9
12.5°	1321.8	1324.2	1325.5	1334.1	1335.3
15°	1300.8	1304.5	1306.9	1318.1	1320.5
17.5°	1277.3	1281.0	1287.2	1299.5	1302.0
20°	1248.9	1253.8	1261.2	1277.3	1281.0
22.5°	1218.0	1222.9	1235.3	1250.1	1256.3
25°	1182.2	1192.1	1204.4	1224.2	1227.9
27.5°	1146.3	1155.0	1171.1	1192.1	1197.0
30°	1104.3	1117.9	1137.7	1158.7	1163.6
32.5°	1063.6	1077.2	1100.6	1122.9	1129.1
35°	1021.6	1033.9	1058.6	1084.6	1092.0
37.5°	973.4	989.5	1016.6	1042.6	1050.0
40°	922.8	942.5	973.4	1000.6	1009.2
42.5°	874.6	895.6	926.5	956.1	966.0
45°	823.9	843.7	880.8	914.1	921.5
47.5°	772.1	794.3	833.8	867.2	879.5
50°	720.2	743.6	785.6	820.2	827.6
52.5°	668.3	693.0	737.5	774.5	778.2
55°	613.9	641.1	688.1	723.9	731.3
57.5°	564.5	588.0	638.6	675.7	684.4
60°	510.2	536.1	590.5	625.1	636.2
62.5°	458.3	485.5	542.3	576.9	586.8
65°	403.9	434.8	490.4	531.2	541.1
67.5°	357.0	386.6	445.9	485.5	495.4
70°	302.6	336.0	399.0	439.8	449.6
72.5°	255.7	290.3	353.3	392.8	407.6
75°	205.1	244.6	307.6	349.6	359.5
77.5°	155.6	201.4	265.6	297.7	297.7
80°	111.2	159.4	218.6	233.5	235.9
82.5°	72.9	119.8	161.8	160.6	160.6
85°	42.0	77.8	96.4	93.9	93.9
87.5°	16.1	32.1	34.6	34.6	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)