

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: P311307

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CA08-W2A-U-5700K**

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: P311307  
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: 24FCZ2-35-UNV-L82765-S-CA08-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5700K 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: 3562.0 lumens  
Efficiency: N/A  
Efficacy: 123.7 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

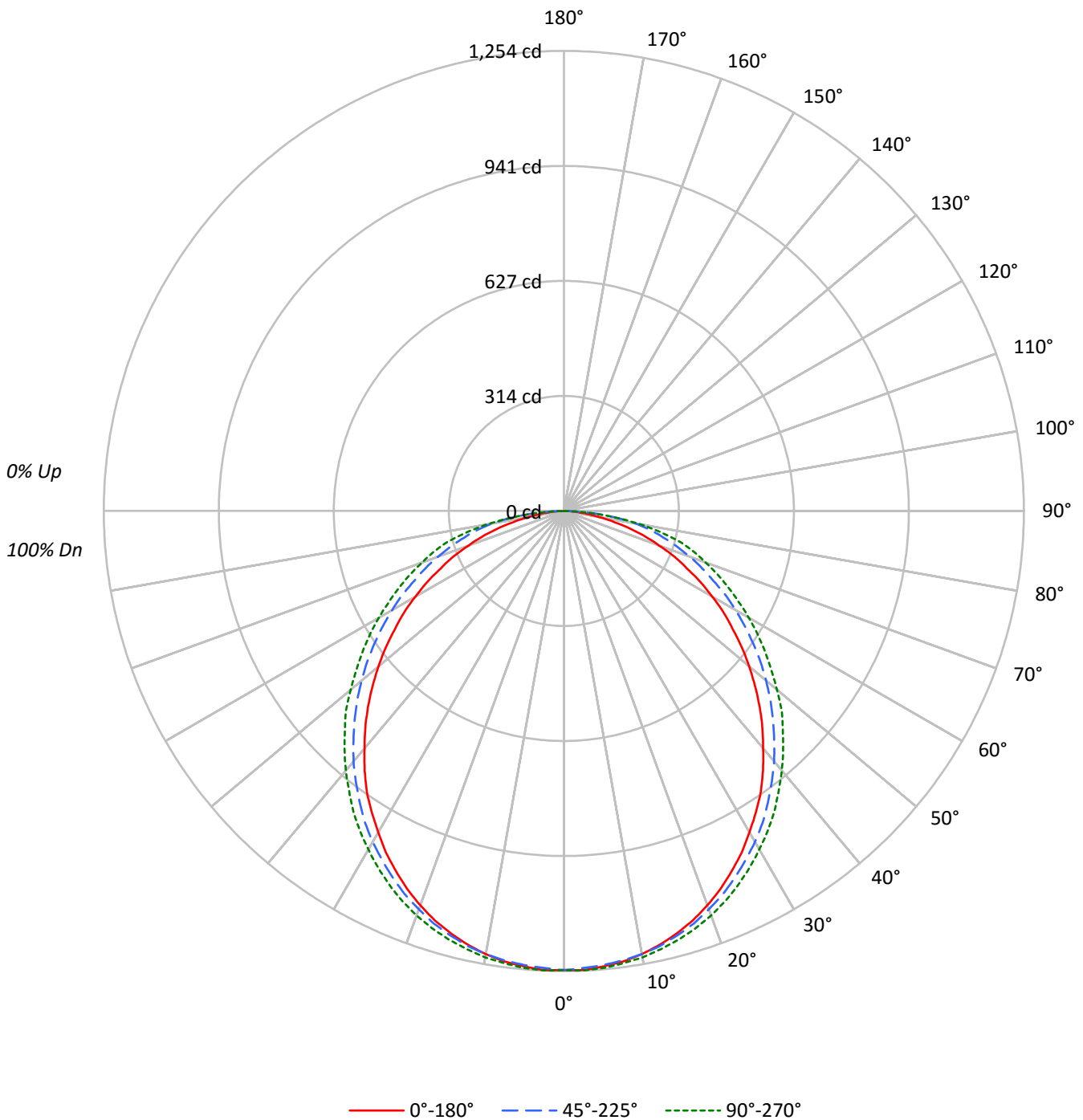
Input Watts (W): 28.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1684	1684	1684
5°	1682	1678	1689
10°	1676	1676	1688
15°	1660	1667	1685
20°	1638	1654	1680
25°	1608	1638	1670
30°	1572	1619	1656
35°	1537	1593	1643
40°	1485	1566	1624
45°	1436	1535	1606
50°	1381	1506	1587
55°	1319	1478	1571
60°	1257	1455	1568
65°	1178	1430	1578
70°	1090	1437	1620
75°	976	1464	1711
80°	789	1552	1674
85°	594	1363	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.5	3.3
10°-20°	338.5	9.5
20°-30°	508.8	14.3
30°-40°	606.1	17.0
40°-50°	620.3	17.4
50°-60°	558.5	15.7
60°-70°	438.6	12.3
70°-80°	284.7	8.0
80°-90°	88.0	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°	965.8	27.1
0°-40°	1571.9	44.1
0°-60°	2750.7	77.2
0°-90°	3562.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3562.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1246	1248	1242	1249	1250	118
15°	1191	1195	1197	1207	1210	336
25°	1083	1092	1103	1121	1125	499
35°	936	947	970	993	1000	584
45°	755	773	807	837	844	582
55°	562	587	630	663	670	504
65°	370	398	449	486	496	368
75°	188	224	282	320	329	199
85°	38	71	88	86	86	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1251.4	1251.4	1251.4	1251.4	1251.4
2.5°	1252.5	1252.5	1246.8	1252.5	1253.6
5°	1245.7	1248.0	1242.3	1249.1	1250.2
7.5°	1238.9	1238.9	1235.5	1242.3	1243.4
10°	1226.5	1227.6	1226.5	1234.4	1235.5
12.5°	1210.6	1212.9	1214.0	1221.9	1223.1
15°	1191.4	1194.8	1197.0	1207.2	1209.5
17.5°	1169.9	1173.3	1178.9	1190.3	1192.5
20°	1143.9	1148.4	1155.2	1169.9	1173.3
22.5°	1115.6	1120.1	1131.4	1145.0	1150.7
25°	1082.8	1091.8	1103.1	1121.2	1124.6
27.5°	1050.0	1057.9	1072.6	1091.8	1096.3
30°	1011.5	1023.9	1042.0	1061.3	1065.8
32.5°	974.2	986.6	1008.1	1028.5	1034.1
35°	935.7	947.0	969.6	993.4	1000.2
37.5°	891.6	906.3	931.2	954.9	961.7
40°	845.2	863.3	891.6	916.5	924.4
42.5°	801.0	820.3	848.6	875.7	884.8
45°	754.7	772.8	806.7	837.3	844.0
47.5°	707.1	727.5	763.7	794.3	805.6
50°	659.6	681.1	719.6	751.3	758.1
52.5°	612.1	634.7	675.5	709.4	712.8
55°	562.3	587.2	630.2	663.0	669.8
57.5°	517.1	538.6	584.9	618.9	626.8
60°	467.3	491.0	540.8	572.5	582.7
62.5°	419.8	444.6	496.7	528.4	537.4
65°	370.0	398.3	449.2	486.5	495.6
67.5°	327.0	354.1	408.4	444.6	453.7
70°	277.2	307.7	365.4	402.8	411.8
72.5°	234.2	265.9	323.6	359.8	373.4
75°	187.8	224.0	281.7	320.2	329.2
77.5°	142.6	184.4	243.3	272.7	272.7
80°	101.8	146.0	200.3	213.8	216.1
82.5°	66.8	109.7	148.2	147.1	147.1
85°	38.5	71.3	88.3	86.0	86.0
87.5°	14.7	29.4	31.7	31.7	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)