

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: P311315

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CA125-W2A-U-5500K**

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: P311315  
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-CA125-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 5500K 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**

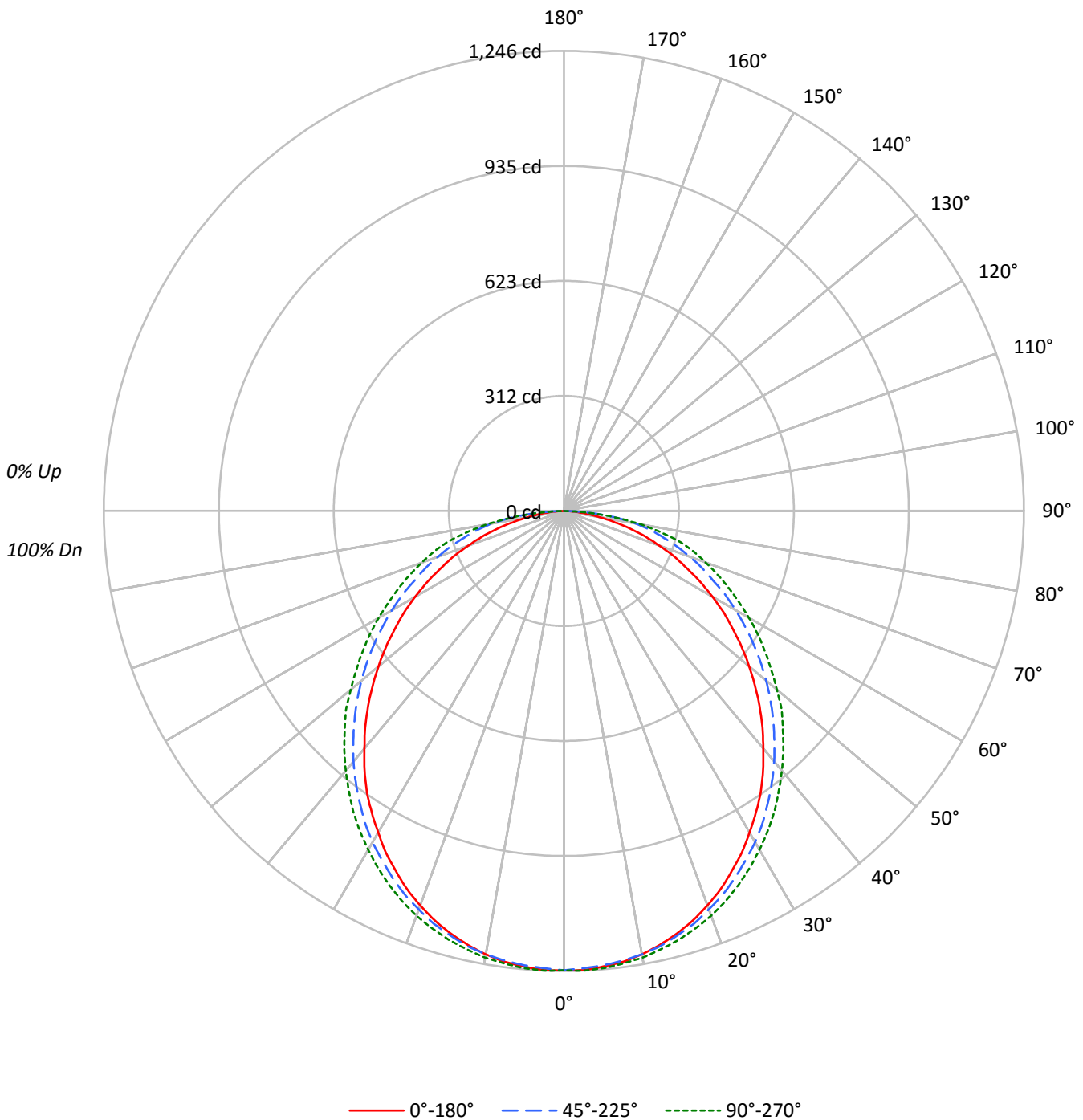
Lumens per Lamp: N/A  
Luminaire Lumens: 3541.0 lumens  
Efficiency: N/A  
Efficacy: 123.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1674	1674	1674
5°	1673	1668	1679
10°	1666	1666	1678
15°	1650	1658	1675
20°	1628	1644	1670
25°	1598	1628	1660
30°	1562	1609	1646
35°	1528	1583	1633
40°	1476	1557	1614
45°	1427	1526	1597
50°	1373	1497	1577
55°	1311	1470	1562
60°	1250	1447	1559
65°	1171	1422	1568
70°	1084	1429	1611
75°	971	1456	1701
80°	784	1543	1664
85°	590	1354	1320



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	3.3
10°-20°	336.5	9.5
20°-30°	505.8	14.3
30°-40°	602.5	17.0
40°-50°	616.7	17.4
50°-60°	555.2	15.7
60°-70°	436.0	12.3
70°-80°	283.0	8.0
80°-90°	87.5	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°	960.1	27.1
0°-40°	1562.7	44.1
0°-60°	2734.5	77.2
0°-90°	3541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3541.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1238	1241	1235	1242	1243	118
15°	1184	1188	1190	1200	1202	334
25°	1076	1085	1097	1115	1118	496
35°	930	941	964	988	994	580
45°	750	768	802	832	839	578
55°	559	584	626	659	666	501
65°	368	396	446	484	493	366
75°	187	223	280	318	327	198
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°	1244.0	1244.0	1244.0	1244.0	1244.0
2.5°	1245.1	1245.1	1239.5	1245.1	1246.2
5°	1238.4	1240.6	1235.0	1241.7	1242.9
7.5°	1231.6	1231.6	1228.2	1235.0	1236.1
10°	1219.2	1220.4	1219.2	1227.1	1228.2
12.5°	1203.5	1205.7	1206.9	1214.7	1215.9
15°	1184.4	1187.7	1190.0	1200.1	1202.4
17.5°	1163.0	1166.4	1172.0	1183.2	1185.5
20°	1137.1	1141.6	1148.4	1163.0	1166.4
22.5°	1109.0	1113.5	1124.8	1138.2	1143.9
25°	1076.4	1085.4	1096.6	1114.6	1118.0
27.5°	1043.8	1051.6	1066.3	1085.4	1089.9
30°	1005.5	1017.9	1035.9	1055.0	1059.5
32.5°	968.4	980.8	1002.2	1022.4	1028.0
35°	930.2	941.4	963.9	987.5	994.3
37.5°	886.3	900.9	925.7	949.3	956.0
40°	840.2	858.2	886.3	911.0	918.9
42.5°	796.3	815.4	843.6	870.6	879.6
45°	750.2	768.2	801.9	832.3	839.1
47.5°	703.0	723.2	759.2	789.6	800.8
50°	655.7	677.1	715.3	746.8	753.6
52.5°	608.5	631.0	671.5	705.2	708.6
55°	559.0	583.7	626.5	659.1	665.9
57.5°	514.0	535.4	581.5	615.2	623.1
60°	464.5	488.1	537.6	569.1	579.2
62.5°	417.3	442.0	493.8	525.3	534.3
65°	367.8	395.9	446.5	483.6	492.6
67.5°	325.1	352.0	406.0	442.0	451.0
70°	275.6	305.9	363.3	400.4	409.4
72.5°	232.8	264.3	321.7	357.7	371.2
75°	186.7	222.7	280.1	318.3	327.3
77.5°	141.7	183.3	241.8	271.1	271.1
80°	101.2	145.1	199.1	212.6	214.8
82.5°	66.4	109.1	147.3	146.2	146.2
85°	38.2	70.9	87.7	85.5	85.5
87.5°	14.6	29.2	31.5	31.5	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)