

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: P314217

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-S-CA08-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: P314217  
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: 24FCZ2-35HE-UNV-L83050-S-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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**

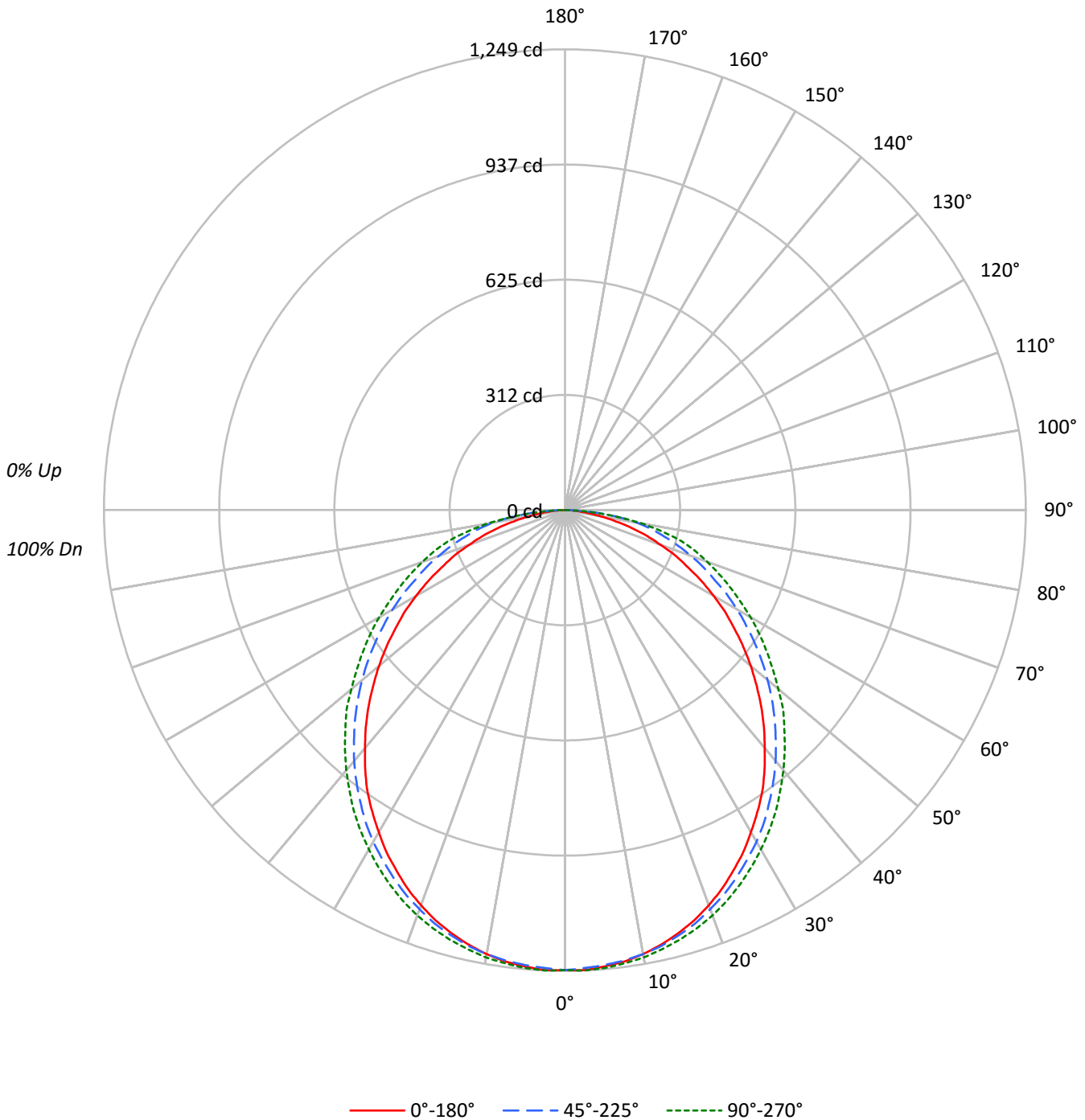
Lumens per Lamp: N/A  
Luminaire Lumens: 3550.0 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1678	1678	1678
5°	1677	1672	1683
10°	1670	1670	1682
15°	1654	1662	1679
20°	1632	1648	1674
25°	1602	1632	1664
30°	1566	1613	1650
35°	1532	1587	1637
40°	1479	1561	1618
45°	1431	1530	1601
50°	1376	1501	1581
55°	1315	1473	1566
60°	1253	1450	1563
65°	1174	1425	1572
70°	1087	1433	1615
75°	973	1460	1706
80°	786	1547	1669
85°	591	1359	1323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.1	3.3
10°-20°	337.4	9.5
20°-30°	507.1	14.3
30°-40°	604.1	17.0
40°-50°	618.2	17.4
50°-60°	556.6	15.7
60°-70°	437.1	12.3
70°-80°	283.7	8.0
80°-90°	87.7	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°	962.6	27.1
0°-40°	1566.6	44.1
0°-60°	2741.5	77.2
0°-90°	3550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3550.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1242	1244	1238	1245	1246	118
15°	1187	1191	1193	1203	1205	335
25°	1079	1088	1099	1118	1121	497
35°	932	944	966	990	997	582
45°	752	770	804	834	841	580
55°	560	585	628	661	668	502
65°	369	397	448	485	494	367
75°	187	223	281	319	328	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°	1247.1	1247.1	1247.1	1247.1	1247.1
2.5°	1248.3	1248.3	1242.6	1248.3	1249.4
5°	1241.5	1243.8	1238.1	1244.9	1246.0
7.5°	1234.7	1234.7	1231.4	1238.1	1239.2
10°	1222.3	1223.5	1222.3	1230.2	1231.4
12.5°	1206.5	1208.8	1209.9	1217.8	1218.9
15°	1187.4	1190.8	1193.0	1203.2	1205.4
17.5°	1166.0	1169.3	1175.0	1186.2	1188.5
20°	1140.0	1144.5	1151.3	1166.0	1169.3
22.5°	1111.8	1116.3	1127.6	1141.1	1146.8
25°	1079.1	1088.1	1099.4	1117.5	1120.8
27.5°	1046.4	1054.3	1069.0	1088.1	1092.7
30°	1008.1	1020.5	1038.5	1057.7	1062.2
32.5°	970.9	983.3	1004.7	1025.0	1030.6
35°	932.5	943.8	966.4	990.0	996.8
37.5°	888.6	903.2	928.0	951.7	958.5
40°	842.3	860.4	888.6	913.4	921.3
42.5°	798.3	817.5	845.7	872.8	881.8
45°	752.1	770.2	804.0	834.4	841.2
47.5°	704.8	725.1	761.1	791.6	802.9
50°	657.4	678.8	717.2	748.7	755.5
52.5°	610.0	632.6	673.2	707.0	710.4
55°	560.4	585.2	628.1	660.8	667.5
57.5°	515.3	536.7	583.0	616.8	624.7
60°	465.7	489.4	539.0	570.6	580.7
62.5°	418.3	443.2	495.0	526.6	535.6
65°	368.7	396.9	447.7	484.9	493.9
67.5°	325.9	352.9	407.1	443.2	452.2
70°	276.3	306.7	364.2	401.4	410.5
72.5°	233.4	265.0	322.5	358.6	372.1
75°	187.2	223.3	280.8	319.1	328.1
77.5°	142.1	183.8	242.4	271.8	271.8
80°	101.5	145.5	199.6	213.1	215.4
82.5°	66.5	109.4	147.7	146.6	146.6
85°	38.3	71.0	88.0	85.7	85.7
87.5°	14.7	29.3	31.6	31.6	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)