

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: P313840

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CA08-W2A-U-3000K**

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: P313840  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3000K 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**

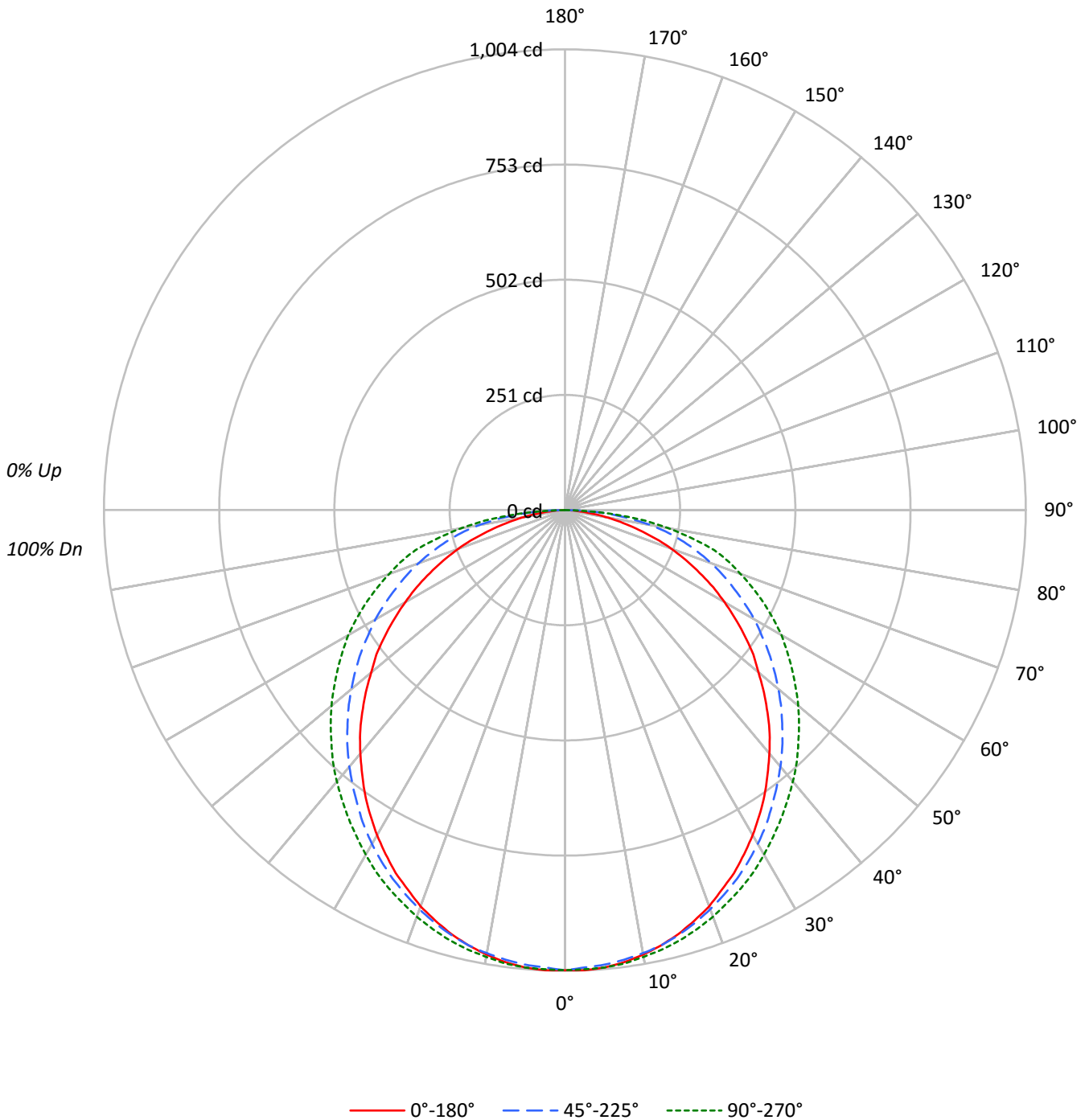
Lumens per Lamp: N/A  
Luminaire Lumens: 3040.0 lumens  
Efficiency: N/A  
Efficacy: 117.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1349	1349	1349
5°	1351	1343	1351
10°	1344	1339	1350
15°	1332	1335	1352
20°	1316	1326	1350
25°	1295	1316	1349
30°	1271	1305	1348
35°	1246	1292	1349
40°	1217	1283	1357
45°	1188	1274	1368
50°	1153	1271	1389
55°	1124	1273	1417
60°	1080	1284	1466
65°	1031	1297	1519
70°	976	1337	1603
75°	870	1395	1751
80°	742	1477	1790
85°	530	1463	1712



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.9	3.1
10°-20°	271.3	8.9
20°-30°	409.8	13.5
30°-40°	493.9	16.2
40°-50°	518.5	17.1
50°-60°	485.1	16.0
60°-70°	400.6	13.2
70°-80°	273.0	9.0
80°-90°	93.1	3.1
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°	776.0	25.5
0°-40°	1269.8	41.8
0°-60°	2273.4	74.8
0°-90°	3040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3040.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1003	1003	1003	1003	1003	
5°	1000	1000	994	1000	1000	95
15°	956	957	958	968	970	270
25°	872	876	887	904	909	401
35°	758	766	787	813	821	474
45°	624	637	670	706	719	481
55°	479	498	543	587	604	428
65°	324	351	408	459	477	321
75°	167	206	268	319	337	179
85°	34	68	95	107	111	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1002.6	1002.6	1002.6	1002.6	1002.6
2.5°	1003.6	1002.6	997.5	1002.6	1001.6
5°	1000.5	999.5	994.5	1000.5	1000.5
7.5°	993.5	993.5	988.4	995.5	996.5
10°	983.4	983.4	980.4	988.4	988.4
12.5°	971.3	971.3	971.3	979.4	980.4
15°	956.2	957.2	958.2	968.3	970.3
17.5°	938.0	940.0	943.1	955.2	957.2
20°	918.9	920.9	925.9	940.0	943.1
22.5°	894.6	899.7	906.7	922.9	925.9
25°	872.5	876.5	886.6	903.7	908.8
27.5°	845.2	851.3	864.4	882.5	889.6
30°	818.0	824.0	840.2	861.4	867.4
32.5°	788.7	797.8	815.0	837.2	844.2
35°	758.5	766.5	786.7	812.9	821.0
37.5°	725.2	736.3	758.5	786.7	796.8
40°	692.9	705.0	730.2	760.5	772.6
42.5°	660.6	672.7	701.0	735.3	747.4
45°	624.3	637.4	669.7	706.0	719.1
47.5°	588.0	604.2	639.5	677.8	691.9
50°	550.7	568.9	607.2	647.5	663.7
52.5°	517.4	534.6	574.9	618.3	633.4
55°	479.1	498.3	542.6	587.0	604.2
57.5°	439.8	460.9	508.3	556.8	573.9
60°	401.4	424.6	477.1	525.5	544.7
62.5°	364.1	387.3	441.8	492.2	511.4
65°	323.8	351.0	407.5	458.9	477.1
67.5°	285.4	314.7	374.2	424.6	442.8
70°	248.1	276.4	339.9	389.3	407.5
72.5°	207.8	240.1	303.6	355.0	374.2
75°	167.4	205.8	268.3	318.7	336.9
77.5°	130.1	169.4	232.0	273.3	282.4
80°	95.8	136.2	190.6	219.9	231.0
82.5°	61.5	101.9	145.2	166.4	175.5
85°	34.3	67.6	94.8	106.9	110.9
87.5°	14.1	29.2	38.3	43.4	43.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)