

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: P310626

Luminaire Tested: **24FCZ2-35-UNV-L82765-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: P310626  
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: 24FCZ2-35-UNV-L82765-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 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**

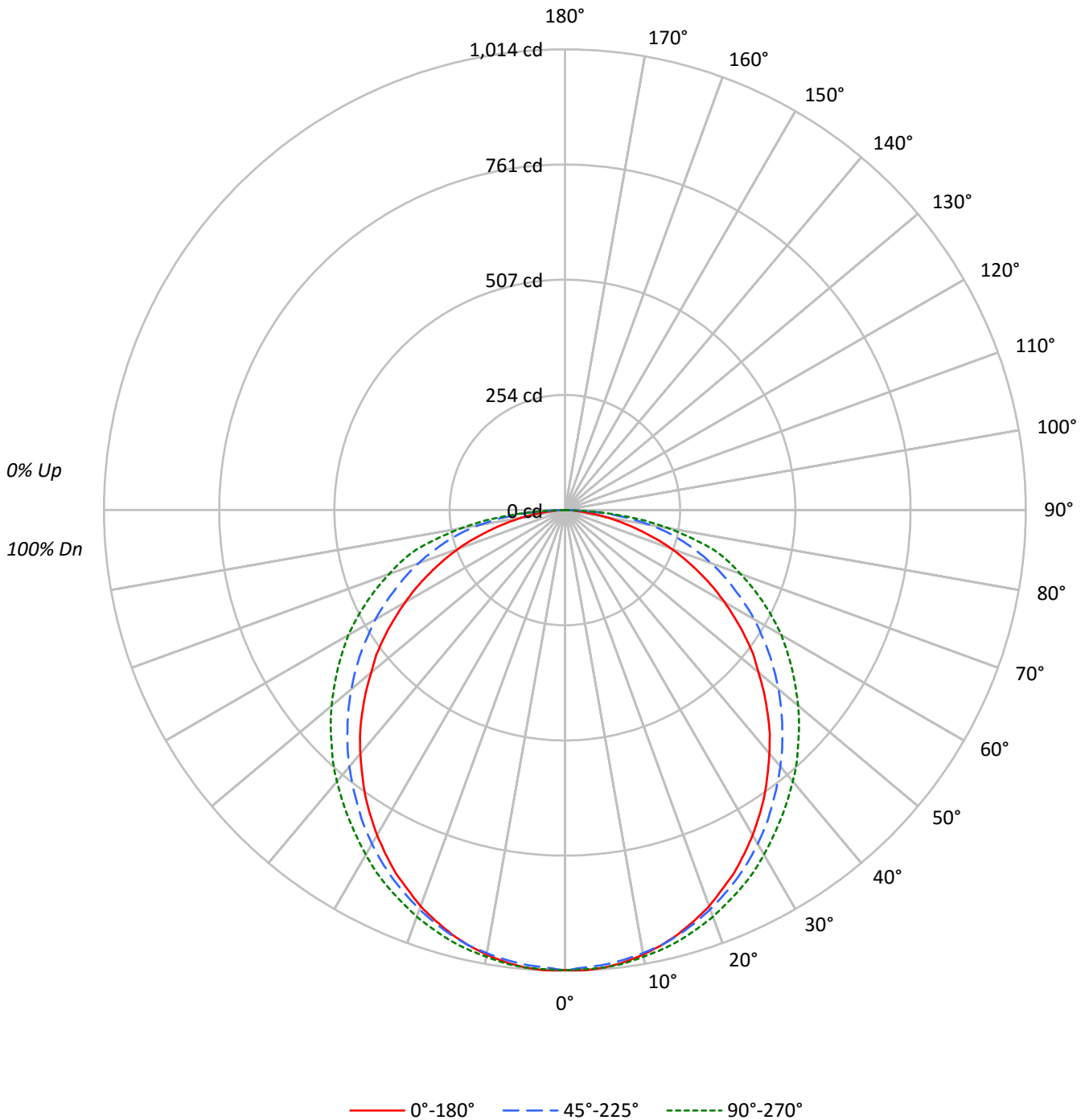
Lumens per Lamp: N/A  
Luminaire Lumens: 3070.0 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1362	1362	1362
5°	1365	1356	1365
10°	1357	1353	1364
15°	1345	1348	1365
20°	1329	1339	1364
25°	1308	1329	1362
30°	1283	1318	1361
35°	1258	1305	1362
40°	1229	1295	1370
45°	1200	1287	1382
50°	1164	1284	1403
55°	1135	1285	1431
60°	1091	1297	1480
65°	1041	1310	1534
70°	986	1351	1619
75°	879	1408	1769
80°	750	1492	1808
85°	534	1477	1729



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.8	3.1
10°-20°	274.0	8.9
20°-30°	413.8	13.5
30°-40°	498.8	16.2
40°-50°	523.6	17.1
50°-60°	489.9	16.0
60°-70°	404.5	13.2
70°-80°	275.7	9.0
80°-90°	94.0	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°	783.6	25.5
0°-40°	1282.4	41.8
0°-60°	2295.8	74.8
0°-90°	3070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3070.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1010	1009	1004	1010	1010	96
15°	966	967	968	978	980	272
25°	881	885	895	913	918	405
35°	766	774	794	821	829	479
45°	630	644	676	713	726	486
55°	484	503	548	593	610	432
65°	327	354	412	463	482	324
75°	169	208	271	322	340	180
85°	35	68	96	108	112	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1012.5	1012.5	1012.5	1012.5	1012.5
2.5°	1013.5	1012.5	1007.4	1012.5	1011.4
5°	1010.4	1009.4	1004.3	1010.4	1010.4
7.5°	1003.3	1003.3	998.2	1005.3	1006.3
10°	993.1	993.1	990.1	998.2	998.2
12.5°	980.9	980.9	980.9	989.0	990.1
15°	965.6	966.6	967.6	977.8	979.9
17.5°	947.3	949.3	952.4	964.6	966.6
20°	927.9	930.0	935.0	949.3	952.4
22.5°	903.5	908.6	915.7	932.0	935.0
25°	881.1	885.1	895.3	912.6	917.7
27.5°	853.6	859.7	872.9	891.2	898.4
30°	826.1	832.2	848.5	869.9	876.0
32.5°	796.5	805.7	823.0	845.4	852.5
35°	766.0	774.1	794.5	821.0	829.1
37.5°	732.4	743.6	766.0	794.5	804.7
40°	699.8	712.0	737.4	768.0	780.2
42.5°	667.2	679.4	707.9	742.5	754.8
45°	630.5	643.7	676.3	713.0	726.2
47.5°	593.8	610.1	645.8	684.5	698.7
50°	556.1	574.5	613.2	653.9	670.2
52.5°	522.5	539.8	580.6	624.4	639.7
55°	483.8	503.2	548.0	592.8	610.1
57.5°	444.1	465.5	513.4	562.3	579.6
60°	405.4	428.8	481.8	530.7	550.0
62.5°	367.7	391.1	446.1	497.1	516.4
65°	327.0	354.5	411.5	463.4	481.8
67.5°	288.3	317.8	377.9	428.8	447.2
70°	250.6	279.1	343.3	393.2	411.5
72.5°	209.8	242.4	306.6	358.5	377.9
75°	169.1	207.8	270.9	321.9	340.2
77.5°	131.4	171.1	234.3	276.0	285.2
80°	96.8	137.5	192.5	222.0	233.3
82.5°	62.1	102.9	146.7	168.1	177.2
85°	34.6	68.2	95.7	108.0	112.0
87.5°	14.3	29.5	38.7	43.8	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)