

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: P310627

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA08-W2A-U-3500K**

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: P310627  
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-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3500K 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**

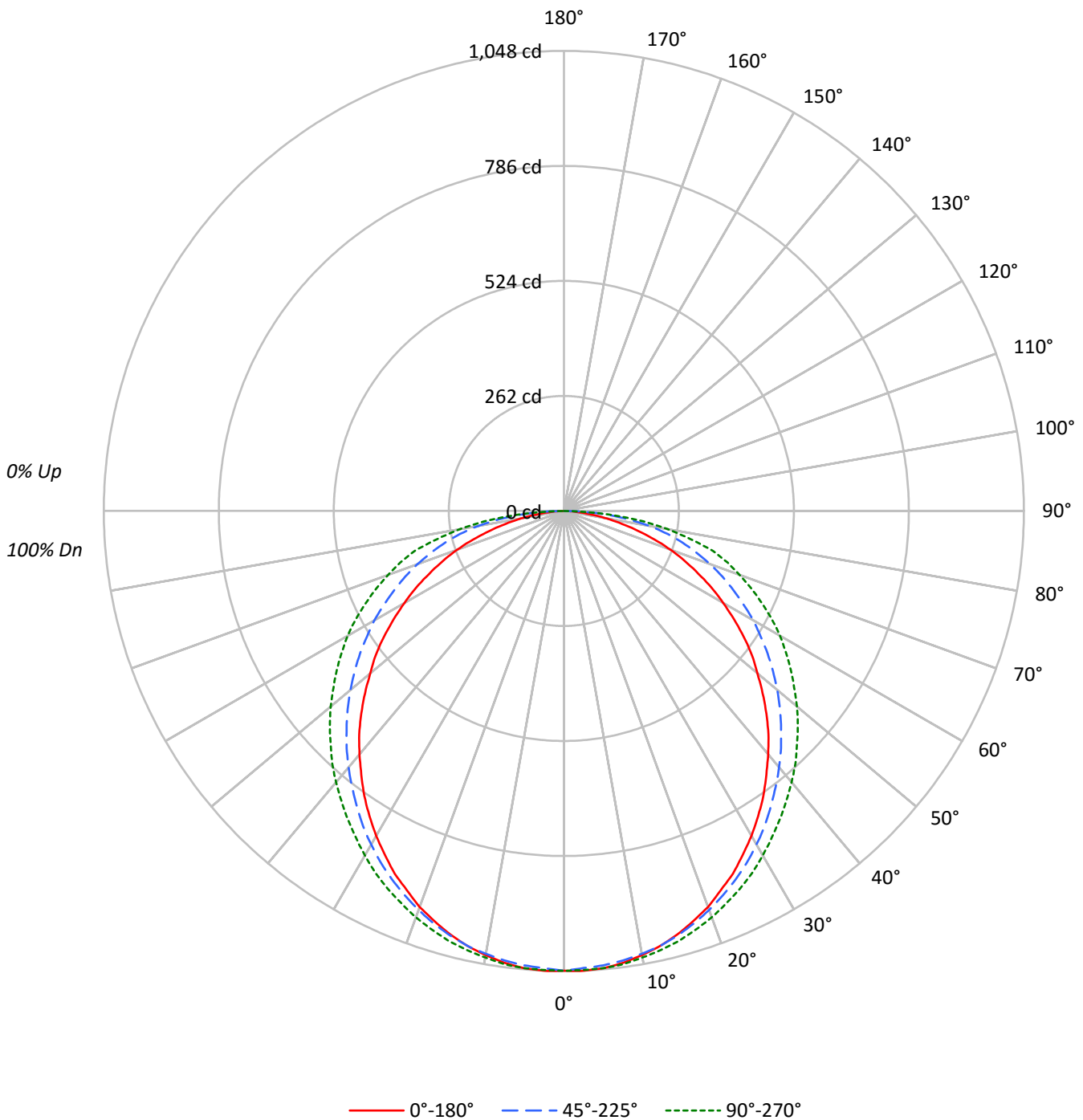
Lumens per Lamp: N/A  
Luminaire Lumens: 3176.0 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1409	1409	1409
5°	1412	1403	1412
10°	1404	1399	1411
15°	1391	1394	1412
20°	1375	1385	1411
25°	1353	1375	1409
30°	1328	1364	1408
35°	1302	1350	1409
40°	1271	1340	1418
45°	1241	1331	1430
50°	1204	1328	1451
55°	1174	1330	1481
60°	1129	1341	1531
65°	1077	1355	1587
70°	1020	1397	1675
75°	909	1457	1829
80°	776	1543	1870
85°	553	1530	1789



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.1	3.1
10°-20°	283.4	8.9
20°-30°	428.1	13.5
30°-40°	516.0	16.2
40°-50°	541.7	17.1
50°-60°	506.8	16.0
60°-70°	418.5	13.2
70°-80°	285.2	9.0
80°-90°	97.3	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°	810.7	25.5
0°-40°	1326.6	41.8
0°-60°	2375.1	74.8
0°-90°	3176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3176.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1047	1047	1047	1047	1047	
5°	1045	1044	1039	1045	1045	99
15°	999	1000	1001	1012	1014	282
25°	912	916	926	944	949	419
35°	792	801	822	849	858	495
45°	652	666	700	738	751	503
55°	500	520	567	613	631	447
65°	338	367	426	480	498	336
75°	175	215	280	333	352	187
85°	36	71	99	112	116	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1047.4	1047.4	1047.4	1047.4	1047.4
2.5°	1048.5	1047.4	1042.1	1047.4	1046.4
5°	1045.3	1044.3	1039.0	1045.3	1045.3
7.5°	1037.9	1037.9	1032.7	1040.0	1041.1
10°	1027.4	1027.4	1024.2	1032.7	1032.7
12.5°	1014.8	1014.8	1014.8	1023.2	1024.2
15°	998.9	1000.0	1001.1	1011.6	1013.7
17.5°	980.0	982.1	985.2	997.9	1000.0
20°	960.0	962.1	967.3	982.1	985.2
22.5°	934.7	939.9	947.3	964.2	967.3
25°	911.5	915.7	926.2	944.2	949.4
27.5°	883.0	889.4	903.1	922.0	929.4
30°	854.6	860.9	877.8	899.9	906.2
32.5°	824.0	833.5	851.4	874.6	882.0
35°	792.4	800.8	821.9	849.3	857.7
37.5°	757.6	769.2	792.4	821.9	832.5
40°	723.9	736.6	762.9	794.5	807.2
42.5°	690.2	702.8	732.3	768.2	780.8
45°	652.3	666.0	699.7	737.6	751.3
47.5°	614.3	631.2	668.1	708.1	722.9
50°	575.3	594.3	634.4	676.5	693.4
52.5°	540.6	558.5	600.6	645.9	661.7
55°	500.5	520.5	566.9	613.3	631.2
57.5°	459.4	481.6	531.1	581.7	599.6
60°	419.4	443.6	498.4	549.0	569.0
62.5°	380.4	404.6	461.5	514.2	534.2
65°	338.3	366.7	425.7	479.5	498.4
67.5°	298.2	328.8	390.9	443.6	462.6
70°	259.2	288.7	355.1	406.7	425.7
72.5°	217.1	250.8	317.2	370.9	390.9
75°	174.9	215.0	280.3	333.0	351.9
77.5°	135.9	177.0	242.4	285.6	295.0
80°	100.1	142.3	199.2	229.7	241.3
82.5°	64.3	106.4	151.7	173.9	183.4
85°	35.8	70.6	99.1	111.7	115.9
87.5°	14.8	30.6	40.0	45.3	45.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)