

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: P313847

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CA125-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: P313847  
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-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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**

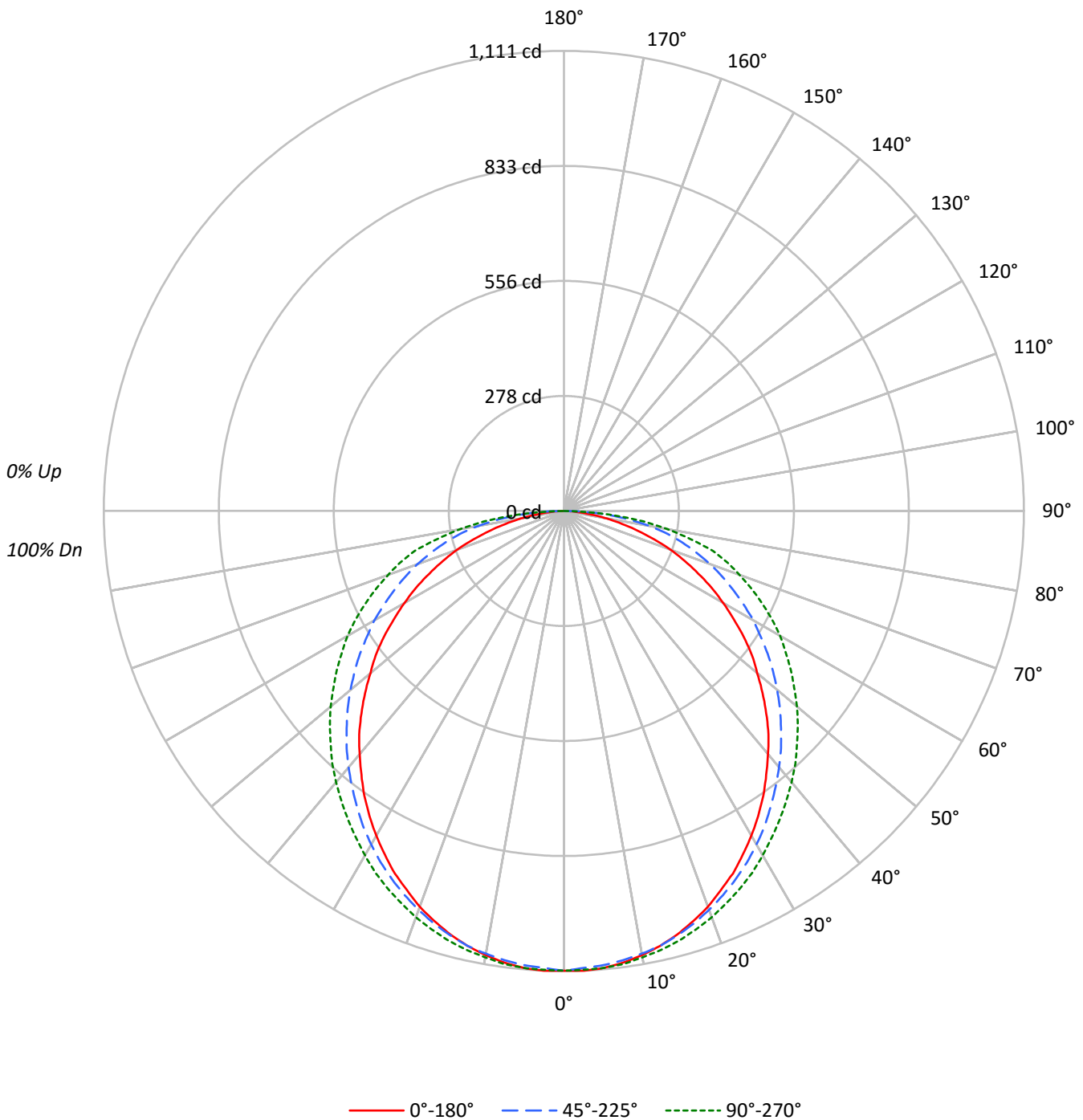
Lumens per Lamp: N/A  
Luminaire Lumens: 3366.0 lumens  
Efficiency: N/A  
Efficacy: 126.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47					47			
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

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

	0°	45°	90°
0°	1494	1494	1494
5°	1496	1487	1496
10°	1488	1483	1495
15°	1475	1478	1496
20°	1457	1468	1495
25°	1434	1457	1494
30°	1407	1445	1492
35°	1379	1431	1493
40°	1348	1420	1503
45°	1315	1411	1515
50°	1276	1407	1538
55°	1244	1409	1569
60°	1196	1421	1623
65°	1141	1436	1682
70°	1081	1481	1775
75°	964	1544	1939
80°	822	1636	1981
85°	587	1621	1896



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.1	3.1
10°-20°	300.4	8.9
20°-30°	453.7	13.5
30°-40°	546.8	16.2
40°-50°	574.1	17.1
50°-60°	537.1	16.0
60°-70°	443.5	13.2
70°-80°	302.2	9.0
80°-90°	103.1	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°	859.2	25.5
0°-40°	1406.0	41.8
0°-60°	2517.2	74.8
0°-90°	3366.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3366.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1108	1107	1101	1108	1108	105
15°	1059	1060	1061	1072	1074	298
25°	966	970	982	1001	1006	444
35°	840	849	871	900	909	525
45°	691	706	742	782	796	533
55°	530	552	601	650	669	473
65°	358	389	451	508	528	356
75°	185	228	297	353	373	198
85°	38	75	105	118	123	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1110.1	1110.1	1110.1	1110.1	1110.1
2.5°	1111.2	1110.1	1104.5	1110.1	1109.0
5°	1107.8	1106.7	1101.1	1107.8	1107.8
7.5°	1100.0	1100.0	1094.4	1102.3	1103.4
10°	1088.9	1088.9	1085.5	1094.4	1094.4
12.5°	1075.5	1075.5	1075.5	1084.4	1085.5
15°	1058.7	1059.8	1060.9	1072.1	1074.3
17.5°	1038.6	1040.8	1044.2	1057.6	1059.8
20°	1017.4	1019.6	1025.2	1040.8	1044.2
22.5°	990.6	996.2	1004.0	1021.9	1025.2
25°	966.0	970.5	981.6	1000.6	1006.2
27.5°	935.9	942.6	957.1	977.2	985.0
30°	905.7	912.4	930.3	953.7	960.4
32.5°	873.3	883.4	902.4	926.9	934.7
35°	839.8	848.8	871.1	900.1	909.1
37.5°	803.0	815.2	839.8	871.1	882.3
40°	767.2	780.6	808.5	842.1	855.5
42.5°	731.5	744.9	776.2	814.1	827.5
45°	691.3	705.8	741.5	781.7	796.3
47.5°	651.1	669.0	708.0	750.5	766.1
50°	609.8	629.9	672.3	717.0	734.8
52.5°	572.9	591.9	636.6	684.6	701.3
55°	530.5	551.7	600.8	650.0	669.0
57.5°	486.9	510.4	562.9	616.5	635.4
60°	444.5	470.2	528.2	581.8	603.1
62.5°	403.2	428.8	489.1	545.0	566.2
65°	358.5	388.6	451.2	508.1	528.2
67.5°	316.0	348.4	414.3	470.2	490.3
70°	274.7	306.0	376.4	431.1	451.2
72.5°	230.1	265.8	336.2	393.1	414.3
75°	185.4	227.8	297.1	352.9	373.0
77.5°	144.1	187.6	256.9	302.6	312.7
80°	106.1	150.8	211.1	243.5	255.7
82.5°	68.1	112.8	160.8	184.3	194.3
85°	38.0	74.8	105.0	118.4	122.8
87.5°	15.6	32.4	42.4	48.0	48.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)