

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: P311233

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311233  
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: 24FCZ2-30-UNV-L82765-S-CP125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 5000K 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**

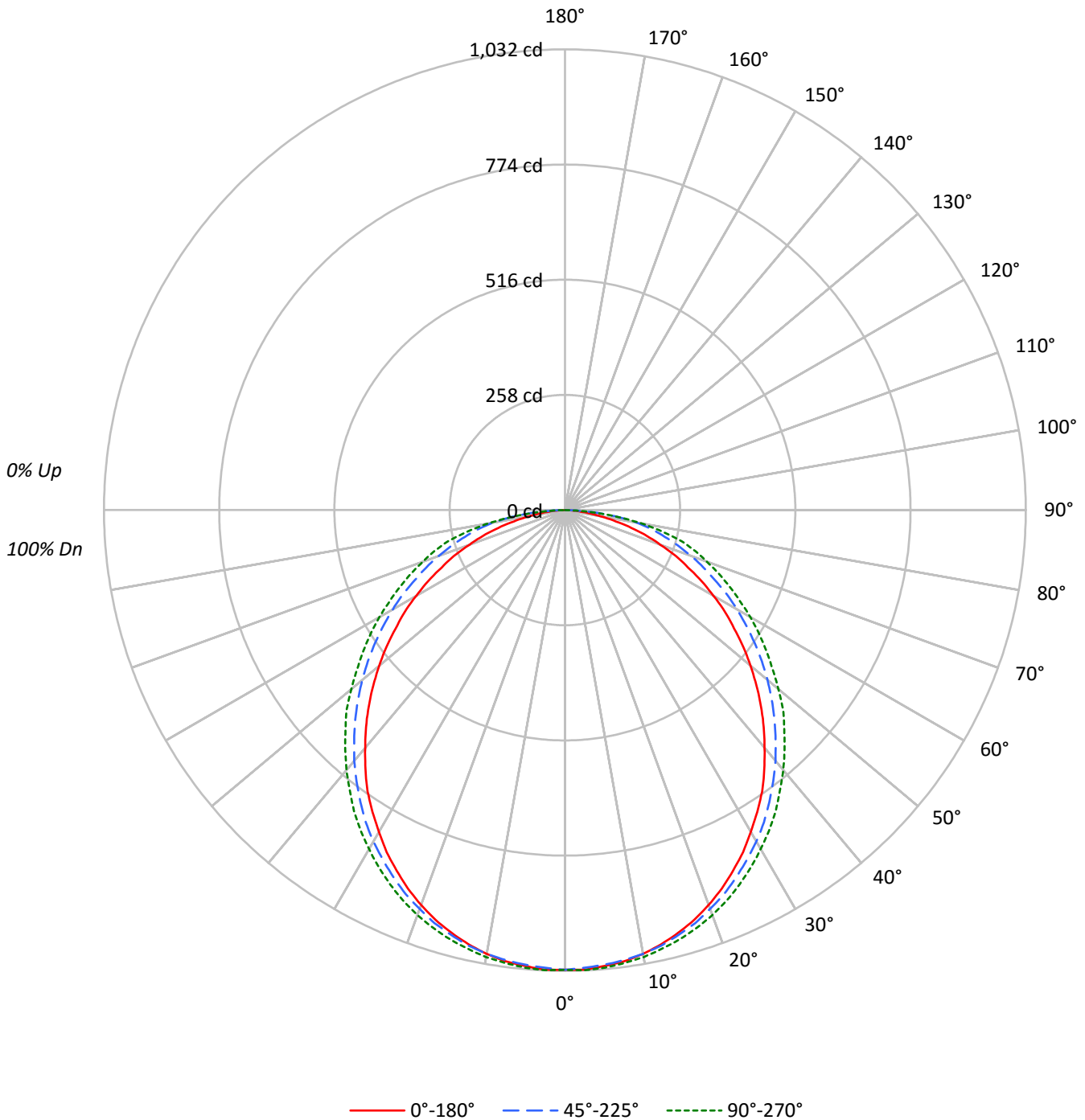
Lumens per Lamp: N/A  
Luminaire Lumens: 2931.0 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1385	1385	1385
5°	1384	1381	1389
10°	1379	1379	1389
15°	1366	1372	1386
20°	1348	1361	1382
25°	1323	1348	1374
30°	1293	1332	1363
35°	1265	1311	1352
40°	1222	1289	1336
45°	1182	1263	1322
50°	1136	1239	1306
55°	1085	1217	1293
60°	1035	1197	1290
65°	969	1177	1298
70°	897	1183	1333
75°	803	1205	1408
80°	649	1277	1378
85°	489	1121	1093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.5	3.3
10°-20°	278.5	9.5
20°-30°	418.7	14.3
30°-40°	498.7	17.0
40°-50°	510.4	17.4
50°-60°	459.6	15.7
60°-70°	360.9	12.3
70°-80°	234.2	8.0
80°-90°	72.5	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°	794.7	27.1
0°-40°	1293.5	44.1
0°-60°	2263.4	77.2
0°-90°	2931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2931.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1025	1027	1022	1028	1029	97
15°	980	983	985	993	995	276
25°	891	898	908	923	925	410
35°	770	779	798	817	823	480
45°	621	636	664	689	694	479
55°	463	483	519	546	551	415
65°	304	328	370	400	408	303
75°	154	184	232	264	271	164
85°	32	59	73	71	71	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1029.7	1029.7	1029.7	1029.7	1029.7
2.5°	1030.6	1030.6	1026.0	1030.6	1031.5
5°	1025.0	1026.9	1022.2	1027.8	1028.7
7.5°	1019.4	1019.4	1016.6	1022.2	1023.2
10°	1009.2	1010.1	1009.2	1015.7	1016.6
12.5°	996.2	998.0	999.0	1005.5	1006.4
15°	980.3	983.1	985.0	993.4	995.2
17.5°	962.6	965.4	970.1	979.4	981.3
20°	941.2	945.0	950.5	962.6	965.4
22.5°	918.0	921.7	931.0	942.2	946.8
25°	891.0	898.4	907.7	922.6	925.4
27.5°	864.0	870.5	882.6	898.4	902.1
30°	832.3	842.5	857.4	873.3	877.0
32.5°	801.6	811.8	829.5	846.3	850.9
35°	769.9	779.2	797.9	817.4	823.0
37.5°	733.6	745.7	766.2	785.8	791.3
40°	695.5	710.3	733.6	754.1	760.6
42.5°	659.1	675.0	698.2	720.6	728.0
45°	621.0	635.9	663.8	688.9	694.5
47.5°	581.9	598.6	628.4	653.6	662.9
50°	542.8	560.5	592.1	618.2	623.8
52.5°	503.7	522.3	555.8	583.7	586.5
55°	462.7	483.2	518.6	545.6	551.1
57.5°	425.5	443.2	481.3	509.3	515.8
60°	384.5	404.1	445.0	471.1	479.5
62.5°	345.4	365.9	408.7	434.8	442.2
65°	304.4	327.7	369.6	400.3	407.8
67.5°	269.1	291.4	336.1	365.9	373.3
70°	228.1	253.2	300.7	331.4	338.9
72.5°	192.7	218.8	266.3	296.1	307.2
75°	154.5	184.3	231.8	263.5	270.9
77.5°	117.3	151.8	200.2	224.4	224.4
80°	83.8	120.1	164.8	176.0	177.8
82.5°	54.9	90.3	122.0	121.0	121.0
85°	31.7	58.7	72.6	70.8	70.8
87.5°	12.1	24.2	26.1	26.1	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)