

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: P311190

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-5700K**

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: P311190  
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: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 5700K 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**

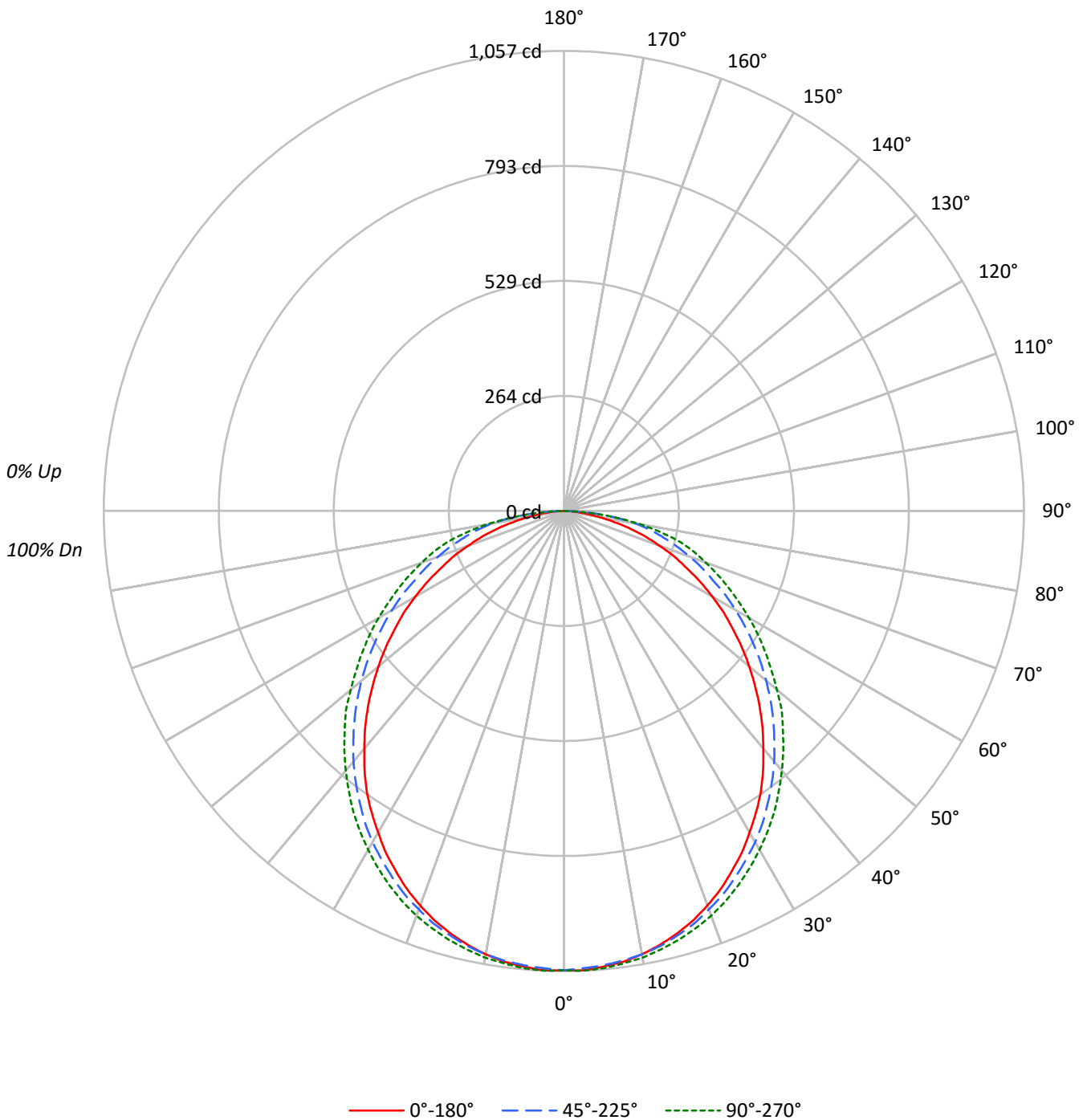
Lumens per Lamp: N/A  
Luminaire Lumens: 3004.0 lumens  
Efficiency: N/A  
Efficacy: 138.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1420	1420	1420
5°	1419	1415	1424
10°	1413	1413	1424
15°	1400	1406	1421
20°	1381	1395	1417
25°	1356	1381	1408
30°	1325	1365	1396
35°	1296	1343	1385
40°	1252	1321	1369
45°	1211	1294	1354
50°	1164	1270	1338
55°	1112	1247	1325
60°	1061	1227	1322
65°	993	1206	1330
70°	920	1212	1366
75°	823	1235	1444
80°	666	1309	1412
85°	500	1149	1119



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.9	3.3
10°-20°	285.5	9.5
20°-30°	429.1	14.3
30°-40°	511.2	17.0
40°-50°	523.1	17.4
50°-60°	471.0	15.7
60°-70°	369.9	12.3
70°-80°	240.0	8.0
80°-90°	74.2	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°	814.5	27.1
0°-40°	1325.7	44.1
0°-60°	2319.8	77.2
0°-90°	3004.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3004.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1055	1055	1055	1055	1055	
5°	1051	1052	1048	1053	1054	100
15°	1005	1008	1010	1018	1020	283
25°	913	921	930	946	948	421
35°	789	799	818	838	844	492
45°	636	652	680	706	712	491
55°	474	495	532	559	565	425
65°	312	336	379	410	418	311
75°	158	189	238	270	278	168
85°	32	60	74	72	72	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1055.3	1055.3	1055.3	1055.3	1055.3
2.5°	1056.3	1056.3	1051.5	1056.3	1057.2
5°	1050.6	1052.5	1047.7	1053.4	1054.4
7.5°	1044.8	1044.8	1042.0	1047.7	1048.6
10°	1034.3	1035.3	1034.3	1041.0	1042.0
12.5°	1021.0	1022.9	1023.8	1030.5	1031.5
15°	1004.8	1007.6	1009.5	1018.1	1020.0
17.5°	986.6	989.5	994.3	1003.8	1005.7
20°	964.7	968.5	974.2	986.6	989.5
22.5°	940.8	944.6	954.2	965.6	970.4
25°	913.2	920.8	930.3	945.6	948.5
27.5°	885.5	892.2	904.6	920.8	924.6
30°	853.0	863.5	878.8	895.0	898.8
32.5°	821.6	832.0	850.2	867.4	872.1
35°	789.1	798.6	817.7	837.8	843.5
37.5°	751.9	764.3	785.3	805.3	811.1
40°	712.8	728.0	751.9	772.9	779.6
42.5°	675.6	691.8	715.6	738.5	746.2
45°	636.4	651.7	680.3	706.1	711.8
47.5°	596.4	613.5	644.1	669.8	679.4
50°	556.3	574.4	606.9	633.6	639.3
52.5°	516.2	535.3	569.6	598.3	601.1
55°	474.2	495.2	531.5	559.2	564.9
57.5°	436.1	454.2	493.3	521.9	528.6
60°	394.1	414.1	456.1	482.8	491.4
62.5°	354.0	375.0	418.9	445.6	453.2
65°	312.0	335.9	378.8	410.3	417.9
67.5°	275.8	298.7	344.5	375.0	382.6
70°	233.8	259.5	308.2	339.7	347.3
72.5°	197.5	224.2	272.9	303.4	314.9
75°	158.4	188.9	237.6	270.0	277.7
77.5°	120.2	155.5	205.1	230.0	230.0
80°	85.9	123.1	168.9	180.3	182.2
82.5°	56.3	92.6	125.0	124.0	124.0
85°	32.4	60.1	74.4	72.5	72.5
87.5°	12.4	24.8	26.7	26.7	25.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)