

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: P311209

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-6500K**

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: P311209  
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-CP250-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 6500K 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**

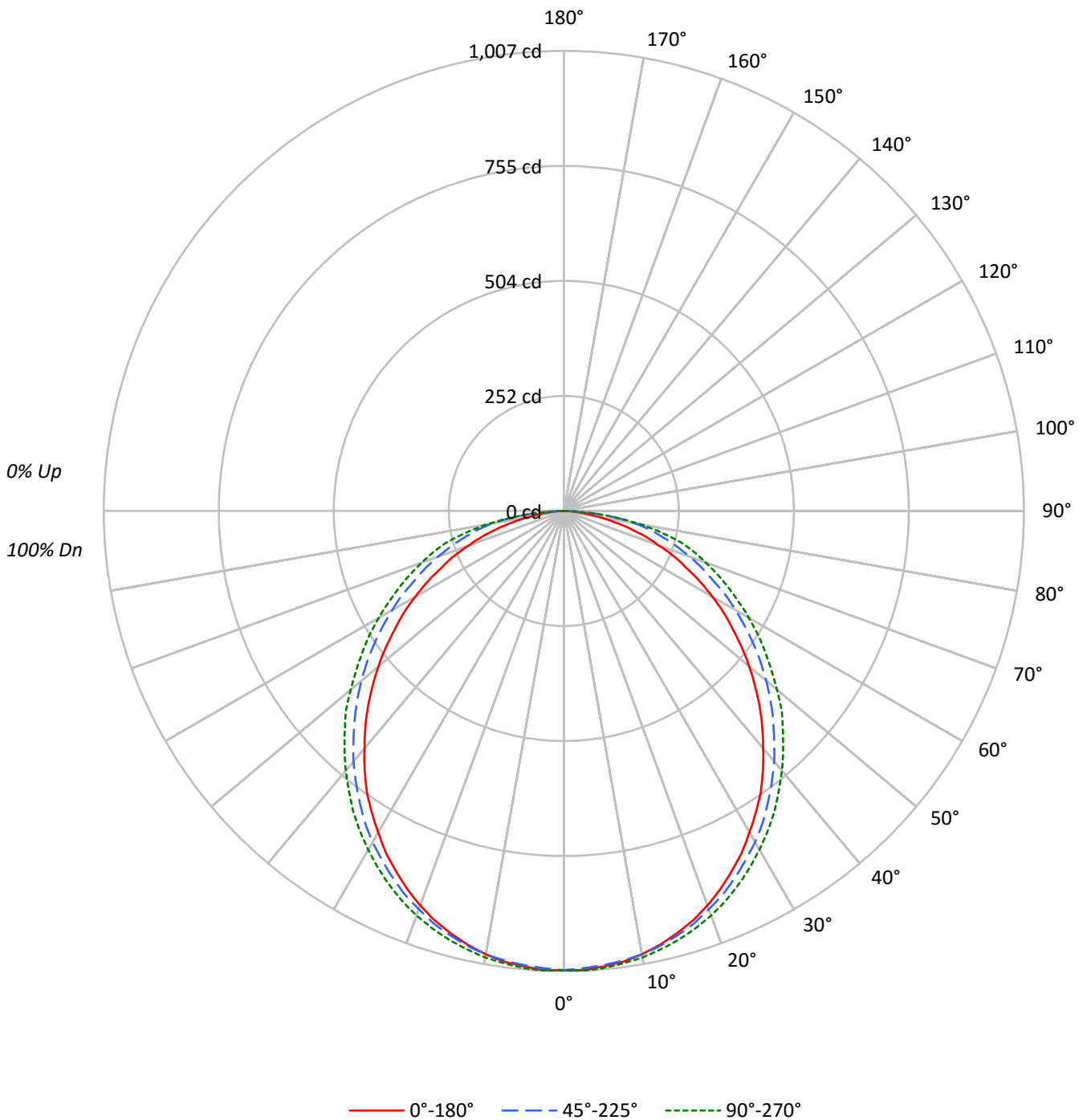
Lumens per Lamp: N/A  
Luminaire Lumens: 2861.0 lumens  
Efficiency: N/A  
Efficacy: 130.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1352	1352	1352
5°	1351	1348	1356
10°	1346	1346	1356
15°	1333	1339	1353
20°	1316	1328	1349
25°	1291	1315	1341
30°	1262	1300	1330
35°	1234	1279	1319
40°	1192	1258	1304
45°	1153	1233	1290
50°	1109	1210	1275
55°	1060	1187	1262
60°	1010	1169	1259
65°	946	1149	1267
70°	876	1155	1301
75°	784	1176	1375
80°	634	1247	1345
85°	477	1095	1067



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.2	3.3
10°-20°	271.9	9.5
20°-30°	408.7	14.3
30°-40°	486.8	17.0
40°-50°	498.2	17.4
50°-60°	448.6	15.7
60°-70°	352.3	12.3
70°-80°	228.6	8.0
80°-90°	70.7	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°	775.7	27.1
0°-40°	1262.6	44.1
0°-60°	2209.4	77.2
0°-90°	2861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2861.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1005	1005	1005	1005	1005	
5°	1000	1002	998	1003	1004	95
15°	957	960	962	970	972	270
25°	870	877	886	901	903	401
35°	752	761	779	798	803	469
45°	606	621	648	672	678	467
55°	452	472	506	532	538	405
65°	297	320	361	391	398	296
75°	151	180	226	257	264	160
85°	31	57	71	69	69	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1005.1	1005.1	1005.1	1005.1	1005.1
2.5°	1006.0	1006.0	1001.5	1006.0	1006.9
5°	1000.5	1002.4	997.8	1003.3	1004.2
7.5°	995.1	995.1	992.4	997.8	998.7
10°	985.1	986.0	985.1	991.5	992.4
12.5°	972.4	974.2	975.1	981.5	982.4
15°	956.9	959.7	961.5	969.6	971.5
17.5°	939.7	942.4	946.9	956.0	957.8
20°	918.8	922.4	927.8	939.7	942.4
22.5°	896.0	899.7	908.8	919.7	924.2
25°	869.7	877.0	886.0	900.6	903.3
27.5°	843.3	849.7	861.5	877.0	880.6
30°	812.4	822.4	837.0	852.4	856.1
32.5°	782.4	792.4	809.7	826.1	830.6
35°	751.5	760.6	778.8	797.9	803.3
37.5°	716.1	727.9	747.9	767.0	772.4
40°	678.8	693.4	716.1	736.1	742.5
42.5°	643.4	658.9	681.6	703.4	710.6
45°	606.1	620.7	647.9	672.5	677.9
47.5°	568.0	584.3	613.4	637.9	647.0
50°	529.8	547.1	578.0	603.4	608.9
52.5°	491.6	509.8	542.5	569.8	572.5
55°	451.7	471.6	506.2	532.5	538.0
57.5°	415.3	432.6	469.8	497.1	503.5
60°	375.3	394.4	434.4	459.8	468.0
62.5°	337.1	357.1	398.9	424.4	431.7
65°	297.2	319.9	360.8	390.8	398.0
67.5°	262.6	284.4	328.1	357.1	364.4
70°	222.6	247.2	293.5	323.5	330.8
72.5°	188.1	213.6	259.9	289.0	299.9
75°	150.9	179.9	226.3	257.2	264.4
77.5°	114.5	148.1	195.4	219.0	219.0
80°	81.8	117.2	160.9	171.8	173.6
82.5°	53.6	88.1	119.0	118.1	118.1
85°	30.9	57.3	70.9	69.1	69.1
87.5°	11.8	23.6	25.4	25.4	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)