

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: P311207

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-5500K**

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: P311207  
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-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 5500K 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: 2846.0 lumens  
Efficiency: N/A  
Efficacy: 131.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

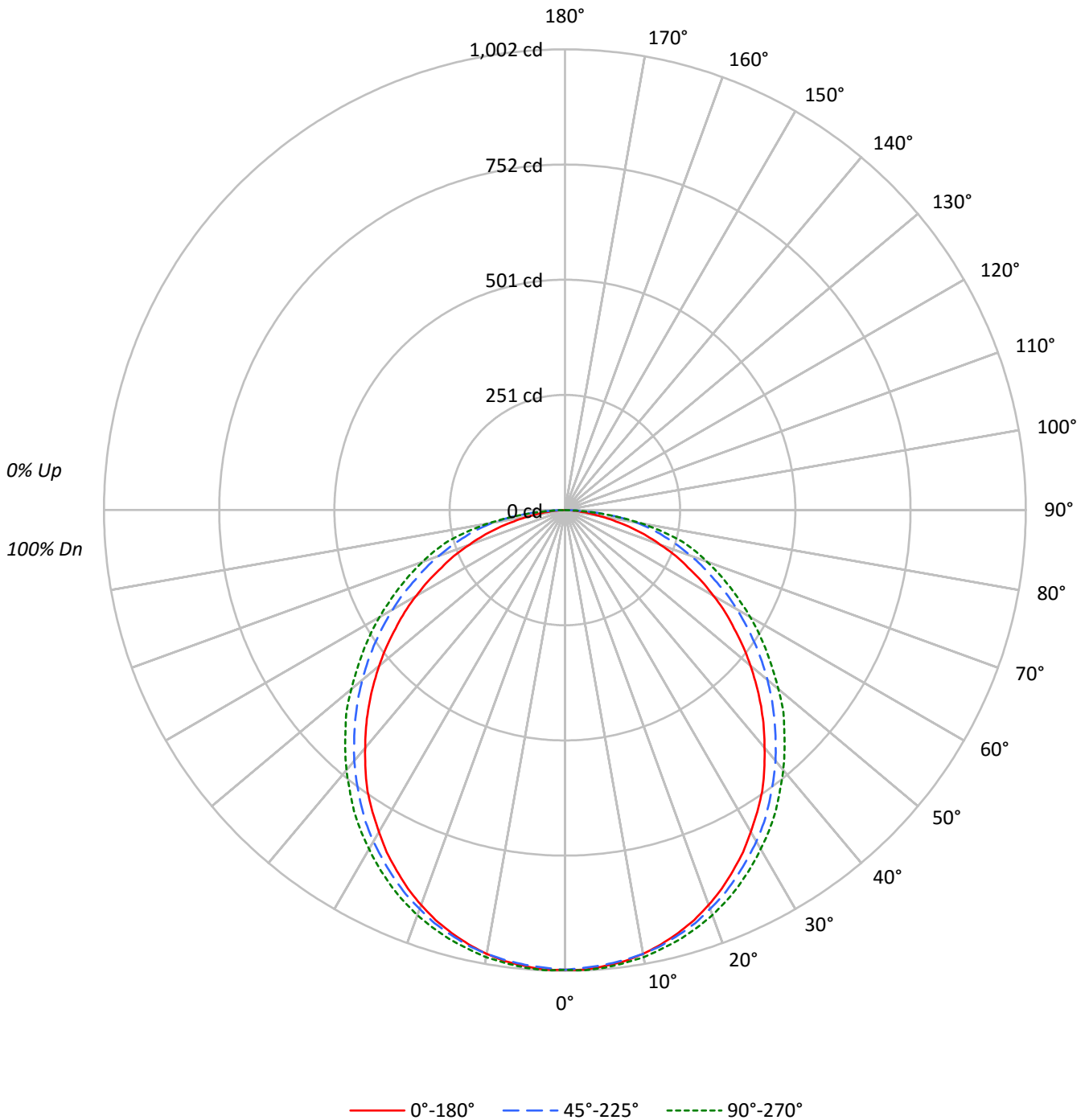
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1345	1345	1345
5°	1344	1341	1349
10°	1339	1339	1349
15°	1326	1332	1346
20°	1309	1322	1342
25°	1284	1309	1334
30°	1256	1294	1323
35°	1228	1272	1313
40°	1186	1251	1297
45°	1147	1226	1283
50°	1103	1203	1268
55°	1054	1181	1255
60°	1005	1163	1253
65°	941	1143	1260
70°	871	1149	1295
75°	780	1170	1368
80°	631	1240	1338
85°	474	1088	1061



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.7	3.3
10°-20°	270.5	9.5
20°-30°	406.6	14.3
30°-40°	484.3	17.0
40°-50°	495.6	17.4
50°-60°	446.2	15.7
60°-70°	350.4	12.3
70°-80°	227.4	8.0
80°-90°	70.3	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°	771.7	27.1
0°-40°	1255.9	44.1
0°-60°	2197.8	77.2
0°-90°	2846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2846.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	995	997	993	998	999	95
15°	952	955	956	965	966	268
25°	865	872	881	896	899	399
35°	748	757	775	794	799	466
45°	603	617	644	669	674	465
55°	449	469	504	530	535	403
65°	296	318	359	389	396	294
75°	150	179	225	256	263	159
85°	31	57	70	69	69	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	999.8	999.8	999.8	999.8	999.8
2.5°	1000.7	1000.7	996.2	1000.7	1001.6
5°	995.3	997.1	992.6	998.0	998.9
7.5°	989.9	989.9	987.2	992.6	993.5
10°	979.9	980.8	979.9	986.3	987.2
12.5°	967.3	969.1	970.0	976.3	977.2
15°	951.9	954.6	956.4	964.6	966.4
17.5°	934.7	937.4	942.0	951.0	952.8
20°	913.9	917.6	923.0	934.7	937.4
22.5°	891.3	895.0	904.0	914.8	919.4
25°	865.1	872.4	881.4	895.9	898.6
27.5°	838.9	845.2	857.0	872.4	876.0
30°	808.2	818.1	832.6	847.9	851.6
32.5°	778.3	788.3	805.5	821.7	826.3
35°	747.6	756.6	774.7	793.7	799.1
37.5°	712.3	724.1	744.0	763.0	768.4
40°	675.3	689.7	712.3	732.2	738.6
42.5°	640.0	655.4	678.0	699.7	706.9
45°	603.0	617.4	644.5	669.0	674.4
47.5°	565.0	581.3	610.2	634.6	643.6
50°	527.0	544.2	574.9	600.3	605.7
52.5°	489.1	507.1	539.7	566.8	569.5
55°	449.3	469.2	503.5	529.7	535.2
57.5°	413.1	430.3	467.4	494.5	500.8
60°	373.3	392.3	432.1	457.4	465.6
62.5°	335.4	355.3	396.9	422.2	429.4
65°	295.6	318.2	358.9	388.7	395.9
67.5°	261.3	283.0	326.3	355.3	362.5
70°	221.5	245.9	292.0	321.8	329.1
72.5°	187.1	212.4	258.5	287.5	298.3
75°	150.1	179.0	225.1	255.8	263.1
77.5°	113.9	147.4	194.4	217.9	217.9
80°	81.4	116.6	160.0	170.9	172.7
82.5°	53.3	87.7	118.4	117.5	117.5
85°	30.7	57.0	70.5	68.7	68.7
87.5°	11.8	23.5	25.3	25.3	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)