

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: P314186

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CP250-W2A-U-3500K**

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: P314186  
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-L83050-S-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 3500K 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**

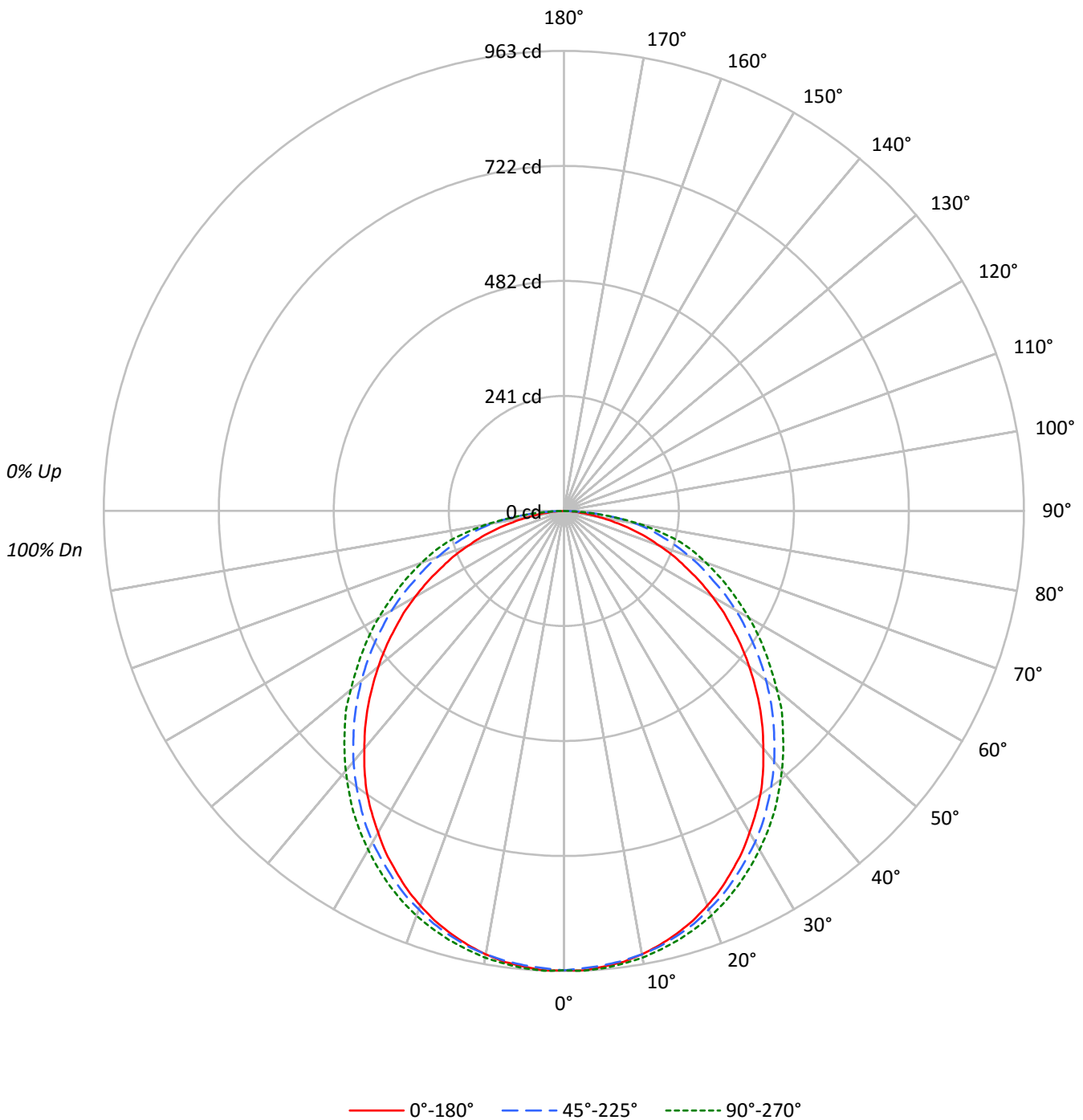
Lumens per Lamp: N/A  
Luminaire Lumens: 2737.0 lumens  
Efficiency: N/A  
Efficacy: 129.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1294	1294	1294
5°	1293	1289	1298
10°	1288	1288	1297
15°	1275	1281	1295
20°	1258	1271	1291
25°	1235	1258	1283
30°	1207	1244	1272
35°	1181	1224	1262
40°	1141	1203	1248
45°	1103	1180	1234
50°	1061	1157	1219
55°	1014	1136	1207
60°	966	1118	1205
65°	905	1099	1212
70°	838	1105	1245
75°	750	1125	1315
80°	606	1192	1287
85°	457	1047	1020



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.0	3.3
10°-20°	260.1	9.5
20°-30°	391.0	14.3
30°-40°	465.7	17.0
40°-50°	476.7	17.4
50°-60°	429.1	15.7
60°-70°	337.0	12.3
70°-80°	218.7	8.0
80°-90°	67.6	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°	742.1	27.1
0°-40°	1207.9	44.1
0°-60°	2113.6	77.2
0°-90°	2737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2737.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	962	962	962	962	962	
5°	957	959	955	960	961	91
15°	915	918	920	928	929	258
25°	832	839	848	862	864	383
35°	719	728	745	763	768	449
45°	580	594	620	643	649	447
55°	432	451	484	510	515	387
65°	284	306	345	374	381	283
75°	144	172	216	246	253	153
85°	30	55	68	66	66	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	961.5	961.5	961.5	961.5	961.5
2.5°	962.4	962.4	958.0	962.4	963.3
5°	957.2	958.9	954.6	959.8	960.7
7.5°	952.0	952.0	949.4	954.6	955.4
10°	942.4	943.3	942.4	948.5	949.4
12.5°	930.2	932.0	932.8	938.9	939.8
15°	915.4	918.1	919.8	927.6	929.4
17.5°	898.9	901.5	905.9	914.6	916.3
20°	878.9	882.4	887.6	898.9	901.5
22.5°	857.2	860.7	869.4	879.8	884.2
25°	832.0	838.9	847.6	861.5	864.2
27.5°	806.8	812.9	824.2	838.9	842.4
30°	777.2	786.8	800.7	815.5	818.9
32.5°	748.5	758.1	774.6	790.3	794.6
35°	719.0	727.7	745.1	763.3	768.5
37.5°	685.1	696.4	715.5	733.8	739.0
40°	649.4	663.3	685.1	704.2	710.3
42.5°	615.5	630.3	652.0	672.9	679.8
45°	579.9	593.8	619.9	643.3	648.6
47.5°	543.4	559.0	586.8	610.3	619.0
50°	506.8	523.4	552.9	577.3	582.5
52.5°	470.3	487.7	519.0	545.1	547.7
55°	432.1	451.2	484.2	509.5	514.7
57.5°	397.3	413.8	449.5	475.5	481.6
60°	359.1	377.3	415.6	439.9	447.7
62.5°	322.5	341.7	381.7	406.0	413.0
65°	284.3	306.0	345.1	373.8	380.8
67.5°	251.2	272.1	313.8	341.7	348.6
70°	213.0	236.5	280.8	309.5	316.5
72.5°	180.0	204.3	248.6	276.5	286.9
75°	144.3	172.1	216.5	246.0	253.0
77.5°	109.5	141.7	186.9	209.5	209.5
80°	78.2	112.1	153.9	164.3	166.1
82.5°	51.3	84.3	113.9	113.0	113.0
85°	29.6	54.8	67.8	66.1	66.1
87.5°	11.3	22.6	24.3	24.3	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)