

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: P314201

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP125-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: P314201
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-L83050-S-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2847.0 lumens
Efficiency: N/A
Efficacy: 121.7 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

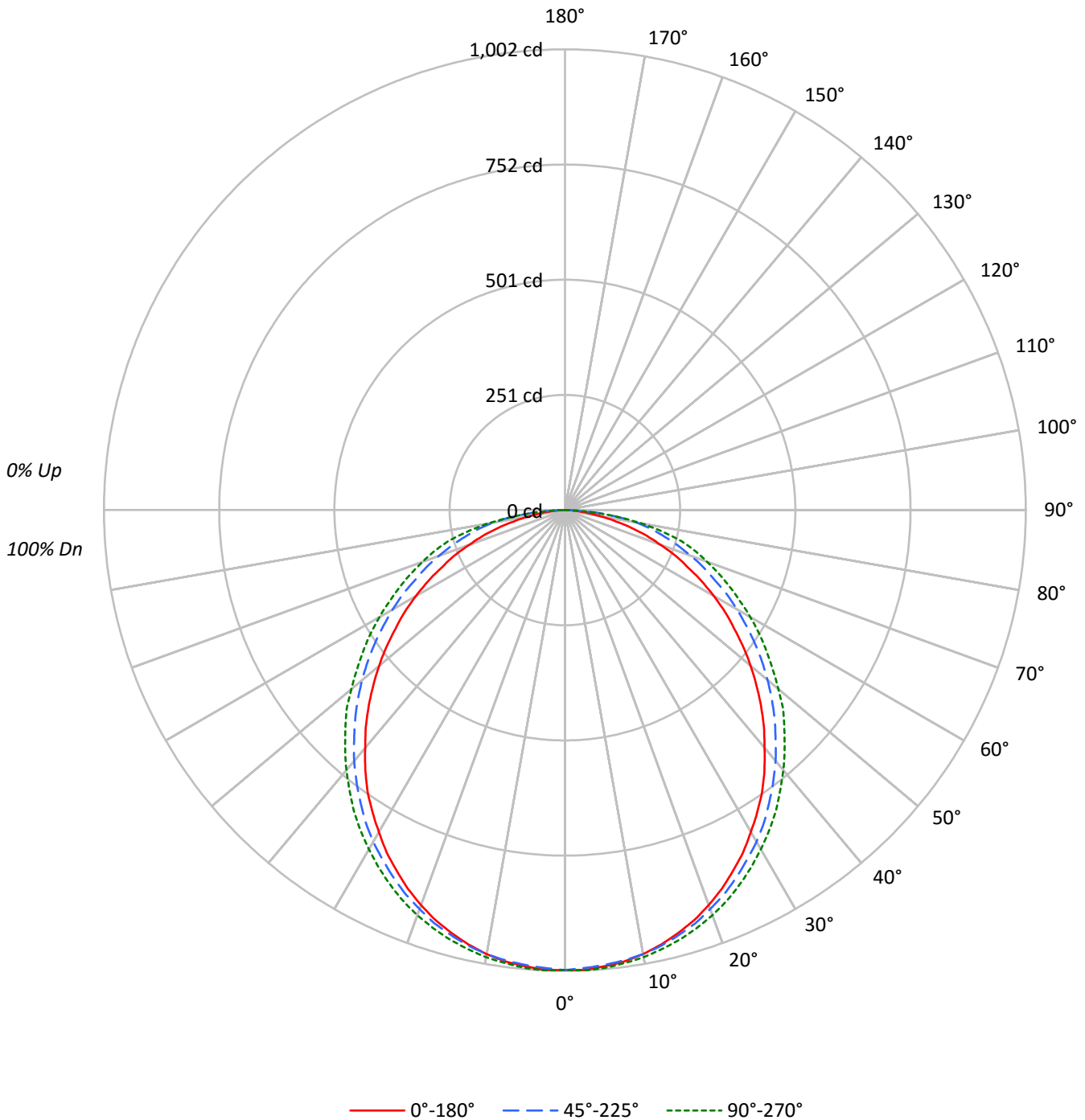
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1346	1346	1346
5°	1345	1341	1350
10°	1339	1339	1349
15°	1326	1333	1347
20°	1309	1322	1343
25°	1285	1309	1334
30°	1256	1294	1324
35°	1228	1273	1313
40°	1186	1252	1298
45°	1148	1227	1284
50°	1104	1204	1268
55°	1054	1182	1256
60°	1005	1163	1253
65°	941	1143	1261
70°	872	1149	1295
75°	780	1171	1368
80°	631	1241	1338
85°	474	1088	1061



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	3.3
10°-20°	270.6	9.5
20°-30°	406.7	14.3
30°-40°	484.4	17.0
40°-50°	495.8	17.4
50°-60°	446.4	15.7
60°-70°	350.5	12.3
70°-80°	227.5	8.0
80°-90°	70.4	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°	772.0	27.1
0°-40°	1256.4	44.1
0°-60°	2198.6	77.2
0°-90°	2847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2847.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	996	998	993	998	999	95
15°	952	955	957	965	967	269
25°	865	873	882	896	899	399
35°	748	757	775	794	799	467
45°	603	618	645	669	675	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°	1000.2	1000.2	1000.2	1000.2	1000.2
2.5°	1001.1	1001.1	996.6	1001.1	1002.0
5°	995.6	997.5	992.9	998.4	999.3
7.5°	990.2	990.2	987.5	992.9	993.8
10°	980.3	981.2	980.3	986.6	987.5
12.5°	967.6	969.4	970.3	976.7	977.6
15°	952.2	955.0	956.8	964.9	966.7
17.5°	935.1	937.8	942.3	951.3	953.1
20°	914.3	917.9	923.3	935.1	937.8
22.5°	891.7	895.3	904.3	915.2	919.7
25°	865.4	872.7	881.7	896.2	898.9
27.5°	839.2	845.5	857.3	872.7	876.3
30°	808.5	818.4	832.9	848.2	851.9
32.5°	778.6	788.6	805.7	822.0	826.5
35°	747.9	756.9	775.0	794.0	799.4
37.5°	712.6	724.4	744.2	763.2	768.7
40°	675.5	690.0	712.6	732.5	738.8
42.5°	640.3	655.6	678.2	699.9	707.2
45°	603.2	617.6	644.8	669.2	674.6
47.5°	565.2	581.5	610.4	634.8	643.9
50°	527.2	544.4	575.1	600.5	605.9
52.5°	489.2	507.3	539.9	567.0	569.7
55°	449.4	469.3	503.7	529.9	535.4
57.5°	413.3	430.5	467.5	494.7	501.0
60°	373.5	392.5	432.3	457.6	465.7
62.5°	335.5	355.4	397.0	422.3	429.5
65°	295.7	318.3	359.0	388.9	396.1
67.5°	261.3	283.0	326.5	355.4	362.6
70°	221.6	246.0	292.1	321.9	329.2
72.5°	187.2	212.5	258.6	287.6	298.4
75°	150.1	179.1	225.2	255.9	263.2
77.5°	113.9	147.4	194.4	217.9	217.9
80°	81.4	116.7	160.1	170.9	172.7
82.5°	53.4	87.7	118.5	117.6	117.6
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)