

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: P314171

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CA125-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: P314171
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 2939.0 lumens
Efficiency: N/A
Efficacy: 139.3 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

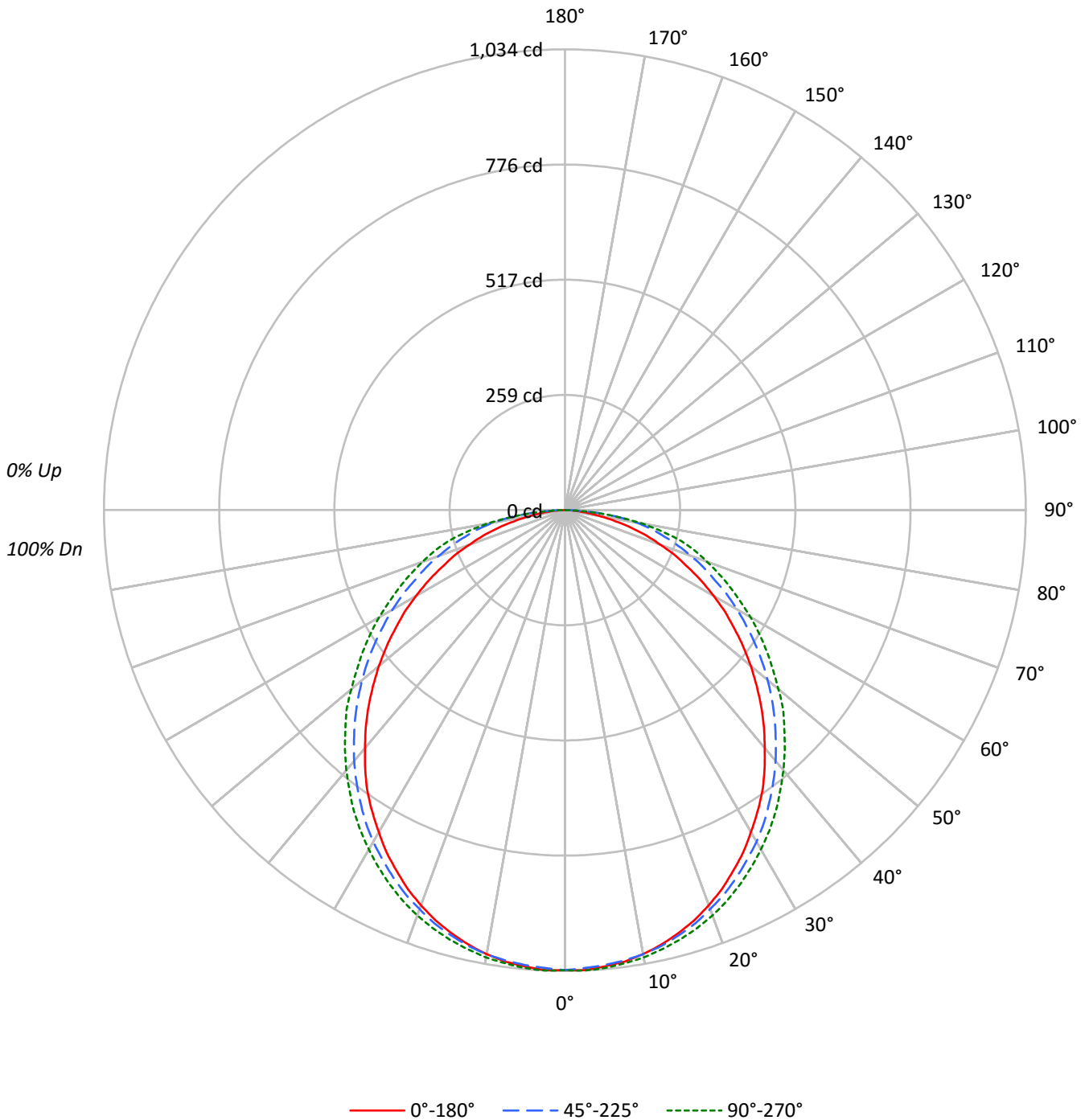
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L83050-S-CA125-W2A-U-3500K

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°	1389	1389	1389
5°	1388	1384	1393
10°	1383	1383	1393
15°	1369	1376	1390
20°	1351	1365	1386
25°	1326	1351	1378
30°	1297	1336	1366
35°	1268	1314	1355
40°	1225	1292	1340
45°	1185	1267	1325
50°	1139	1243	1309
55°	1088	1220	1297
60°	1038	1201	1294
65°	972	1180	1302
70°	900	1186	1337
75°	806	1209	1412
80°	651	1280	1382
85°	489	1124	1095



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.7	3.3
10°-20°	279.3	9.5
20°-30°	419.8	14.3
30°-40°	500.1	17.0
40°-50°	511.8	17.4
50°-60°	460.8	15.7
60°-70°	361.9	12.3
70°-80°	234.9	8.0
80°-90°	72.6	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°	796.9	27.1
0°-40°	1297.0	44.1
0°-60°	2269.6	77.2
0°-90°	2939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1032	1032	1032	1032	1032	
5°	1028	1030	1025	1031	1032	98
15°	983	986	988	996	998	277
25°	893	901	910	925	928	412
35°	772	781	800	820	825	482
45°	623	638	666	691	696	480
55°	464	484	520	547	553	416
65°	305	329	371	401	409	304
75°	155	185	232	264	272	164
85°	32	59	73	71	71	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1032.5	1032.5	1032.5	1032.5	1032.5
2.5°	1033.4	1033.4	1028.8	1033.4	1034.4
5°	1027.8	1029.7	1025.0	1030.6	1031.6
7.5°	1022.2	1022.2	1019.4	1025.0	1026.0
10°	1012.0	1012.9	1012.0	1018.5	1019.4
12.5°	998.9	1000.7	1001.7	1008.2	1009.2
15°	983.0	985.8	987.7	996.1	997.9
17.5°	965.3	968.1	972.7	982.1	983.9
20°	943.8	947.5	953.1	965.3	968.1
22.5°	920.5	924.2	933.5	944.7	949.4
25°	893.4	900.9	910.2	925.1	927.9
27.5°	866.3	872.9	885.0	900.9	904.6
30°	834.6	844.8	859.8	875.7	879.4
32.5°	803.8	814.0	831.8	848.6	853.3
35°	772.0	781.4	800.0	819.6	825.2
37.5°	735.6	747.8	768.3	787.9	793.5
40°	697.4	712.3	735.6	756.2	762.7
42.5°	660.9	676.8	700.2	722.6	730.0
45°	622.7	637.6	665.6	690.8	696.4
47.5°	583.5	600.3	630.1	655.3	664.7
50°	544.3	562.0	593.7	619.9	625.5
52.5°	505.0	523.7	557.3	585.3	588.1
55°	464.0	484.5	520.0	547.1	552.7
57.5°	426.6	444.4	482.6	510.6	517.2
60°	385.6	405.2	446.2	472.4	480.8
62.5°	346.3	366.9	409.8	436.0	443.4
65°	305.3	328.6	370.6	401.4	408.9
67.5°	269.8	292.2	337.0	366.9	374.3
70°	228.7	253.9	301.5	332.3	339.8
72.5°	193.2	219.4	267.0	296.9	308.1
75°	155.0	184.8	232.5	264.2	271.7
77.5°	117.6	152.2	200.7	225.0	225.0
80°	84.0	120.4	165.2	176.4	178.3
82.5°	55.1	90.6	122.3	121.4	121.4
85°	31.7	58.8	72.8	70.9	70.9
87.5°	12.1	24.3	26.1	26.1	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)