

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: P314176

Luminaire Tested: **24FCZ2-30HE-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: P314176
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2882.0 lumens
Efficiency: N/A
Efficacy: 136.6 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

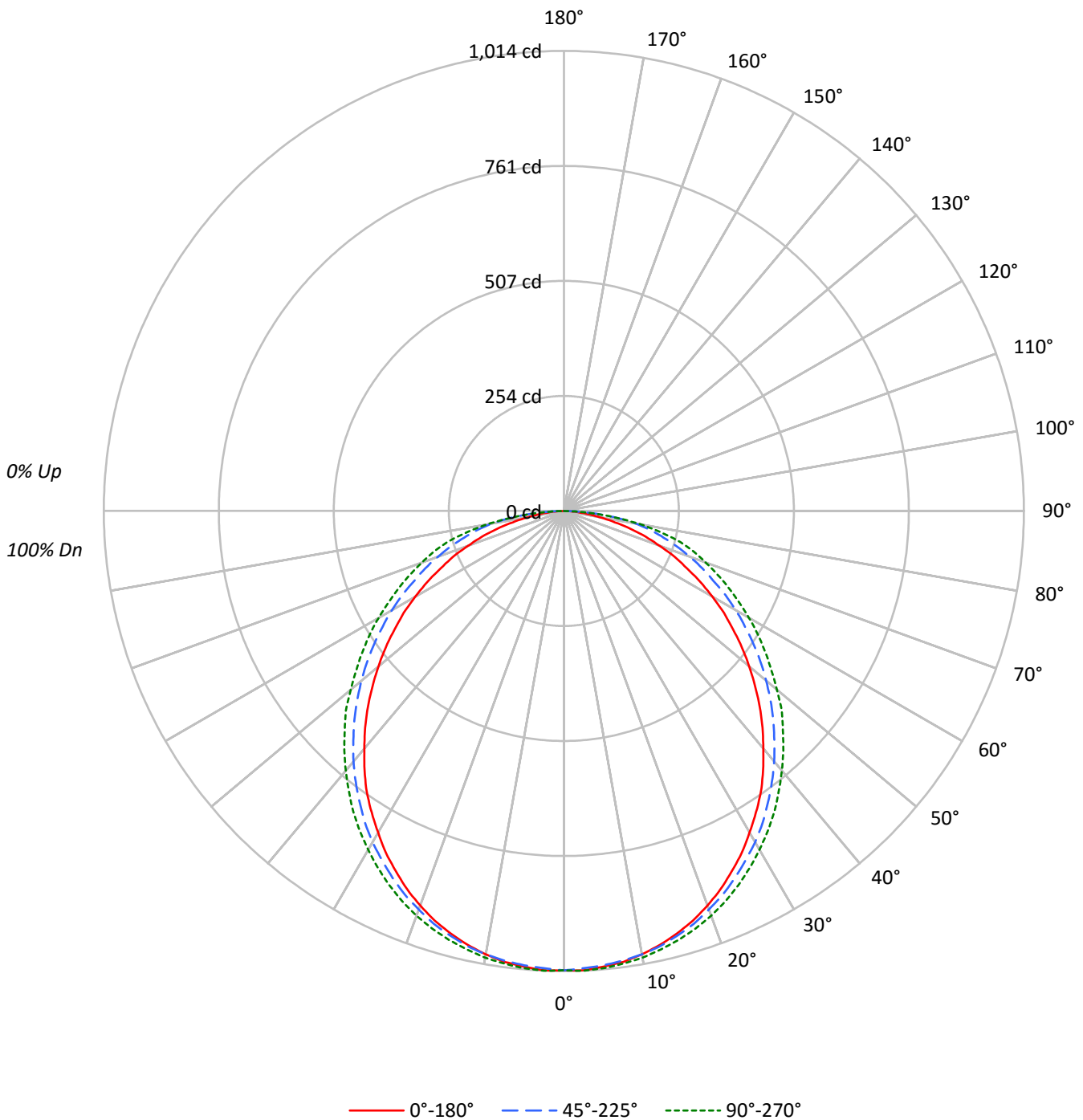
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L83050-S-CP125-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°	1362	1362	1362
5°	1361	1358	1366
10°	1356	1356	1366
15°	1343	1349	1363
20°	1325	1338	1359
25°	1301	1325	1351
30°	1271	1310	1340
35°	1244	1289	1329
40°	1201	1267	1314
45°	1162	1242	1299
50°	1117	1219	1284
55°	1067	1196	1271
60°	1017	1178	1269
65°	953	1157	1277
70°	882	1163	1311
75°	790	1185	1385
80°	638	1255	1354
85°	480	1102	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	3.3
10°-20°	273.9	9.5
20°-30°	411.7	14.3
30°-40°	490.4	17.0
40°-50°	501.9	17.4
50°-60°	451.9	15.7
60°-70°	354.9	12.3
70°-80°	230.3	8.0
80°-90°	71.2	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°	781.4	27.1
0°-40°	1271.8	44.1
0°-60°	2225.6	77.2
0°-90°	2882.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2882.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1008	1010	1005	1011	1012	96
15°	964	967	968	977	979	272
25°	876	883	892	907	910	404
35°	757	766	784	804	809	472
45°	611	625	653	677	683	471
55°	455	475	510	536	542	408
65°	299	322	363	394	401	298
75°	152	181	228	259	266	161
85°	31	58	71	70	70	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1012.5	1012.5	1012.5	1012.5	1012.5
2.5°	1013.4	1013.4	1008.8	1013.4	1014.3
5°	1007.9	1009.7	1005.1	1010.6	1011.5
7.5°	1002.4	1002.4	999.6	1005.1	1006.1
10°	992.3	993.2	992.3	998.7	999.6
12.5°	979.5	981.3	982.3	988.7	989.6
15°	963.9	966.7	968.5	976.8	978.6
17.5°	946.6	949.3	953.9	963.0	964.9
20°	925.5	929.2	934.7	946.6	949.3
22.5°	902.6	906.3	915.4	926.4	931.0
25°	876.1	883.4	892.5	907.2	909.9
27.5°	849.5	855.9	867.8	883.4	887.1
30°	818.4	828.5	843.1	858.7	862.3
32.5°	788.2	798.3	815.6	832.1	836.7
35°	757.1	766.2	784.5	803.7	809.2
37.5°	721.4	733.3	753.4	772.6	778.1
40°	683.8	698.5	721.4	741.5	747.9
42.5°	648.1	663.7	686.6	708.5	715.9
45°	610.6	625.2	652.7	677.4	682.9
47.5°	572.1	588.6	617.9	642.6	651.8
50°	533.7	551.1	582.2	607.8	613.3
52.5°	495.2	513.6	546.5	574.0	576.7
55°	455.0	475.1	509.9	536.4	541.9
57.5°	418.4	435.7	473.3	500.7	507.1
60°	378.1	397.3	437.6	463.2	471.4
62.5°	339.6	359.8	401.9	427.5	434.8
65°	299.3	322.2	363.4	393.6	401.0
67.5°	264.6	286.5	330.5	359.8	367.1
70°	224.3	249.0	295.7	325.9	333.2
72.5°	189.5	215.1	261.8	291.1	302.1
75°	152.0	181.3	227.9	259.1	266.4
77.5°	115.3	149.2	196.8	220.6	220.6
80°	82.4	118.1	162.0	173.0	174.8
82.5°	54.0	88.8	119.9	119.0	119.0
85°	31.1	57.7	71.4	69.6	69.6
87.5°	11.9	23.8	25.6	25.6	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)