

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: P311188

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311188
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-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 2967.0 lumens
Efficiency: N/A
Efficacy: 137.4 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

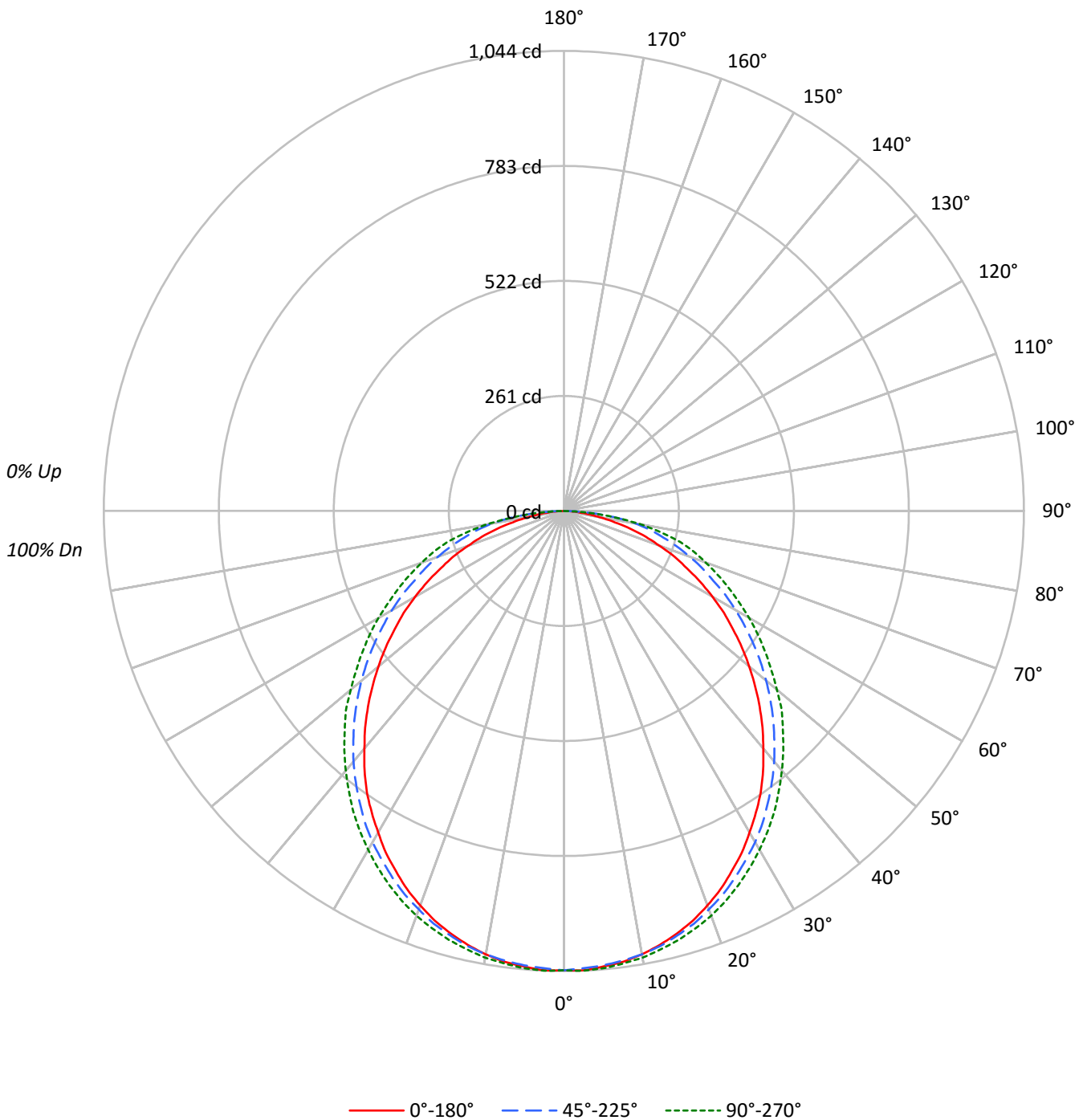
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1402	1402	1402
5°	1401	1398	1407
10°	1396	1396	1406
15°	1382	1389	1403
20°	1364	1378	1399
25°	1339	1364	1391
30°	1309	1349	1379
35°	1280	1327	1368
40°	1237	1304	1352
45°	1196	1279	1338
50°	1150	1255	1322
55°	1099	1231	1309
60°	1047	1212	1306
65°	981	1191	1314
70°	908	1197	1349
75°	813	1220	1425
80°	657	1292	1395
85°	494	1135	1105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.7	3.3
10°-20°	282.0	9.5
20°-30°	423.8	14.3
30°-40°	504.9	17.0
40°-50°	516.7	17.4
50°-60°	465.2	15.7
60°-70°	365.3	12.3
70°-80°	237.1	8.0
80°-90°	73.3	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°	804.5	27.1
0°-40°	1309.4	44.1
0°-60°	2291.2	77.2
0°-90°	2967.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2967.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1042	1042	1042	1042	1042	
5°	1038	1040	1035	1040	1041	99
15°	992	995	997	1006	1008	280
25°	902	909	919	934	937	415
35°	779	789	808	828	833	486
45°	629	644	672	697	703	485
55°	468	489	525	552	558	420
65°	308	332	374	405	413	307
75°	156	187	235	267	274	166
85°	32	59	74	72	72	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1042.3	1042.3	1042.3	1042.3	1042.3
2.5°	1043.3	1043.3	1038.6	1043.3	1044.2
5°	1037.6	1039.5	1034.8	1040.4	1041.4
7.5°	1032.0	1032.0	1029.1	1034.8	1035.7
10°	1021.6	1022.5	1021.6	1028.2	1029.1
12.5°	1008.4	1010.3	1011.2	1017.8	1018.8
15°	992.4	995.2	997.1	1005.6	1007.5
17.5°	974.5	977.3	982.0	991.4	993.3
20°	952.8	956.6	962.2	974.5	977.3
22.5°	929.2	933.0	942.4	953.7	958.5
25°	901.9	909.4	918.9	933.9	936.8
27.5°	874.6	881.2	893.4	909.4	913.2
30°	842.5	852.9	868.0	884.0	887.8
32.5°	811.4	821.8	839.7	856.7	861.4
35°	779.4	788.8	807.7	827.5	833.1
37.5°	742.6	754.9	775.6	795.4	801.1
40°	704.0	719.1	742.6	763.4	770.0
42.5°	667.2	683.3	706.8	729.4	737.0
45°	628.6	643.7	672.0	697.4	703.1
47.5°	589.0	606.0	636.1	661.6	671.0
50°	549.4	567.3	599.4	625.8	631.4
52.5°	509.9	528.7	562.6	590.9	593.7
55°	468.4	489.1	524.9	552.3	557.9
57.5°	430.7	448.6	487.2	515.5	522.1
60°	389.2	409.0	450.5	476.9	485.4
62.5°	349.6	370.4	413.7	440.1	447.7
65°	308.2	331.7	374.1	405.2	412.8
67.5°	272.4	295.0	340.2	370.4	377.9
70°	230.9	256.3	304.4	335.5	343.0
72.5°	195.1	221.5	269.5	299.7	311.0
75°	156.4	186.6	234.7	266.7	274.2
77.5°	118.7	153.6	202.6	227.1	227.1
80°	84.8	121.6	166.8	178.1	180.0
82.5°	55.6	91.4	123.5	122.5	122.5
85°	32.0	59.4	73.5	71.6	71.6
87.5°	12.3	24.5	26.4	26.4	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)