

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: P311222

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CA125-W2A-U-4000K**

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: P311222
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-L82765-S-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2899.0 lumens
Efficiency: N/A
Efficacy: 122.3 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

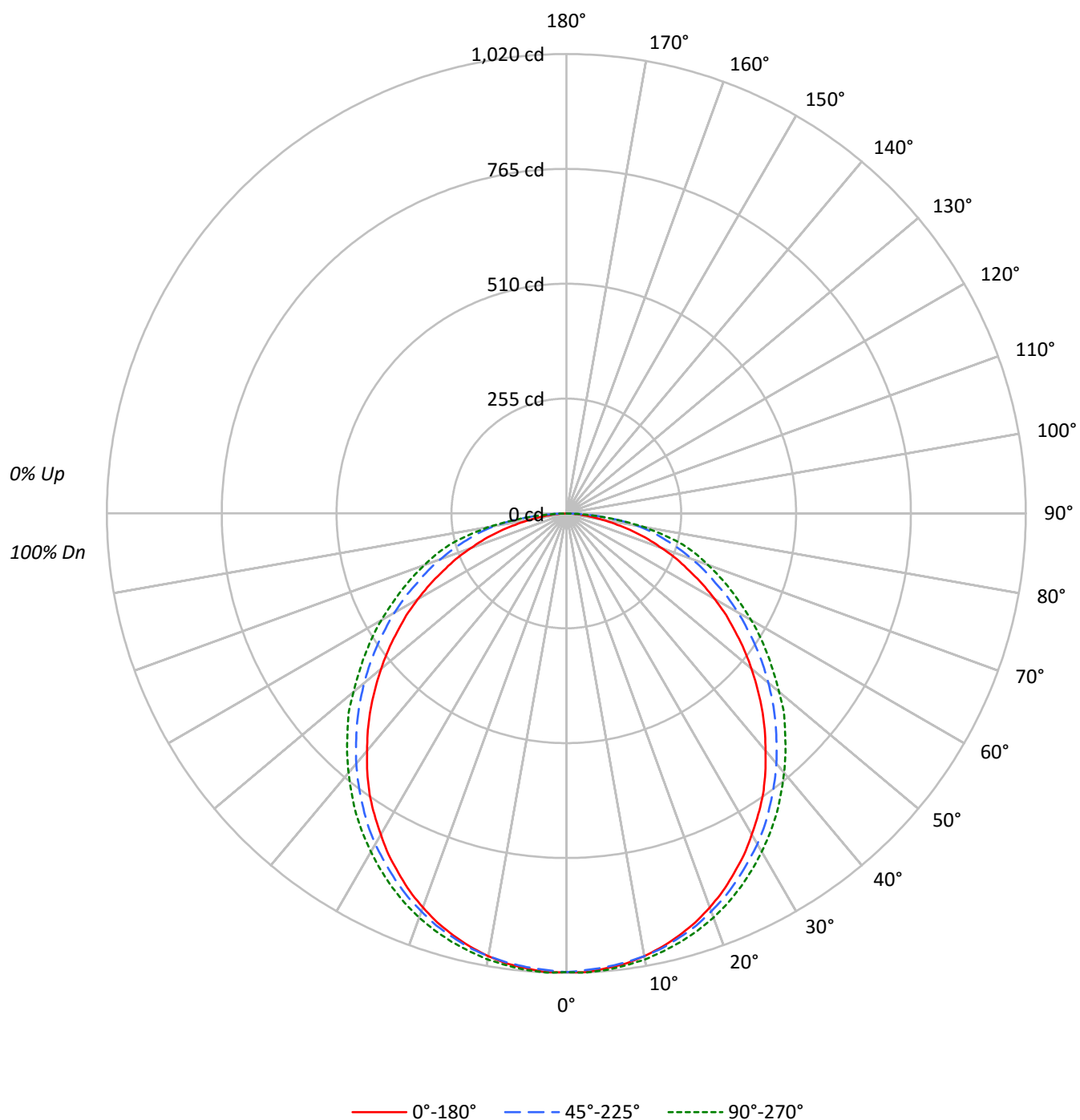
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1370	1370	1370
5°	1369	1366	1374
10°	1364	1364	1374
15°	1351	1357	1371
20°	1333	1346	1367
25°	1308	1333	1359
30°	1279	1318	1348
35°	1251	1296	1337
40°	1208	1274	1321
45°	1169	1249	1307
50°	1124	1226	1292
55°	1074	1203	1279
60°	1023	1185	1276
65°	959	1164	1284
70°	887	1170	1319
75°	795	1192	1393
80°	642	1263	1363
85°	483	1108	1081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	3.3
10°-20°	275.5	9.5
20°-30°	414.1	14.3
30°-40°	493.3	17.0
40°-50°	504.9	17.4
50°-60°	454.5	15.7
60°-70°	356.9	12.3
70°-80°	231.7	8.0
80°-90°	71.6	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°	786.0	27.1
0°-40°	1279.3	44.1
0°-60°	2238.7	77.2
0°-90°	2899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1018	1018	1018	1018	1018	
5°	1014	1016	1011	1017	1018	96
15°	970	972	974	982	984	273
25°	881	889	898	912	915	406
35°	762	771	789	808	814	475
45°	614	629	657	681	687	474
55°	458	478	513	540	545	410
65°	301	324	366	396	403	300
75°	153	182	229	261	268	162
85°	31	58	72	70	70	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1018.4	1018.4	1018.4	1018.4	1018.4
2.5°	1019.4	1019.4	1014.8	1019.4	1020.3
5°	1013.8	1015.7	1011.1	1016.6	1017.5
7.5°	1008.3	1008.3	1005.5	1011.1	1012.0
10°	998.2	999.1	998.2	1004.6	1005.5
12.5°	985.3	987.1	988.1	994.5	995.4
15°	969.6	972.4	974.2	982.5	984.4
17.5°	952.1	954.9	959.5	968.7	970.6
20°	931.0	934.6	940.2	952.1	954.9
22.5°	907.9	911.6	920.8	931.9	936.5
25°	881.2	888.6	897.8	912.5	915.3
27.5°	854.5	861.0	872.9	888.6	892.3
30°	823.2	833.4	848.1	863.7	867.4
32.5°	792.8	803.0	820.5	837.0	841.6
35°	761.5	770.7	789.2	808.5	814.0
37.5°	725.6	737.6	757.8	777.2	782.7
40°	687.9	702.6	725.6	745.9	752.3
42.5°	651.9	667.6	690.6	712.7	720.1
45°	614.2	628.9	656.6	681.4	686.9
47.5°	575.5	592.1	621.6	646.4	655.6
50°	536.8	554.3	585.6	611.4	617.0
52.5°	498.2	516.6	549.7	577.4	580.1
55°	457.7	477.9	512.9	539.6	545.1
57.5°	420.8	438.3	476.1	503.7	510.1
60°	380.3	399.6	440.2	465.9	474.2
62.5°	341.6	361.9	404.2	430.0	437.4
65°	301.1	324.1	365.6	396.0	403.3
67.5°	266.1	288.2	332.4	361.9	369.3
70°	225.6	250.5	297.4	327.8	335.2
72.5°	190.6	216.4	263.4	292.8	303.9
75°	152.9	182.3	229.3	260.6	268.0
77.5°	116.0	150.1	198.0	221.9	221.9
80°	82.9	118.8	163.0	174.0	175.9
82.5°	54.3	89.3	120.6	119.7	119.7
85°	31.3	58.0	71.8	70.0	70.0
87.5°	12.0	23.9	25.8	25.8	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)