

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: P309114

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP125-W2A-U-3000K**

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: P309114
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L82765-S-CP125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3000K 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: 3871.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

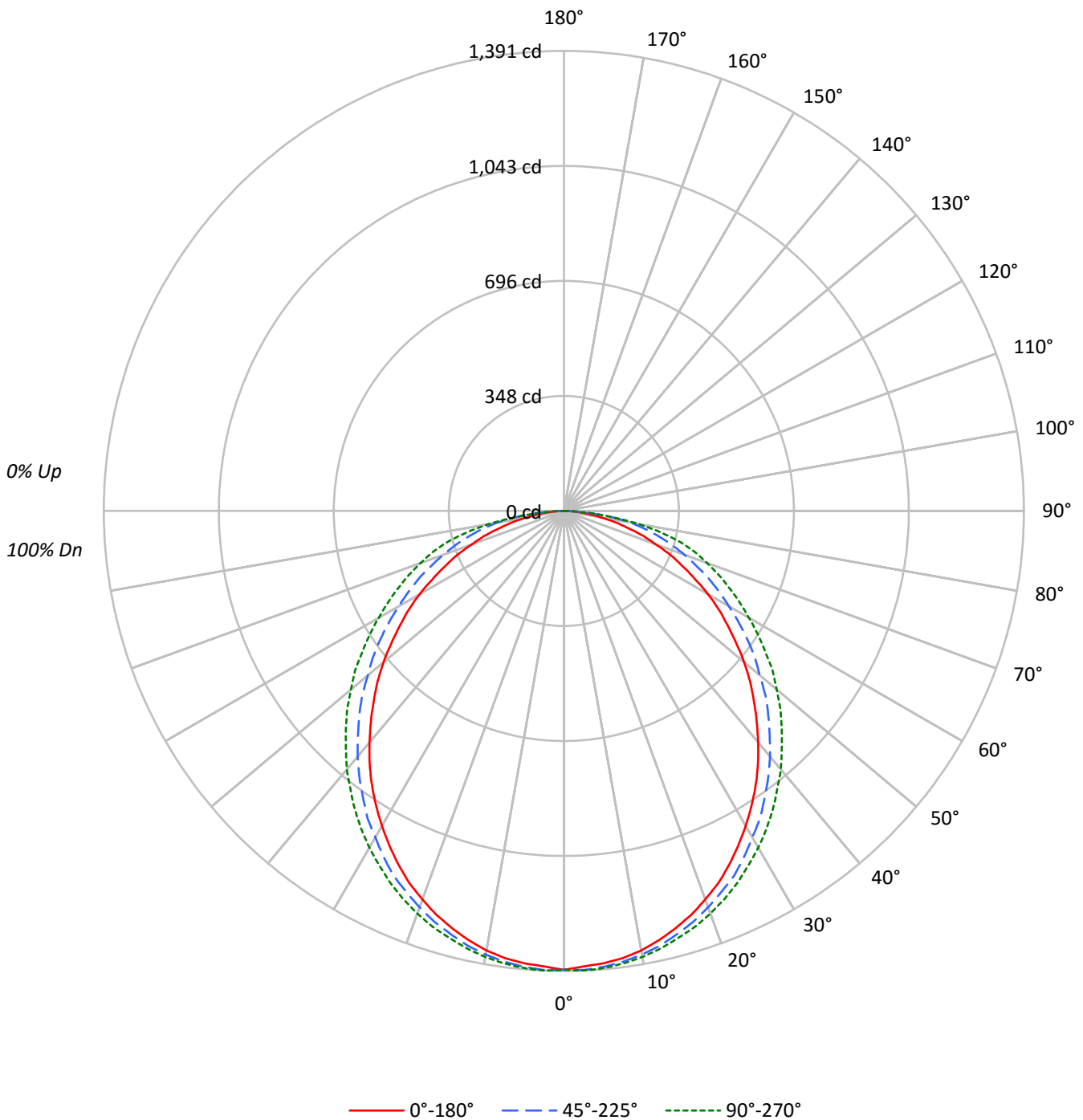
Input Watts (W): 36.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3733	3733	3733
5°	3708	3737	3747
10°	3687	3721	3741
15°	3638	3688	3723
20°	3579	3651	3708
25°	3507	3614	3684
30°	3418	3541	3654
35°	3323	3477	3619
40°	3210	3407	3585
45°	3093	3327	3547
50°	2979	3236	3516
55°	2839	3178	3491
60°	2712	3101	3480
65°	2530	3082	3519
70°	2330	3055	3624
75°	2103	3098	3812
80°	1819	3191	3583
85°	1507	2677	2677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.2	3.4
10°-20°	373.3	9.6
20°-30°	558.6	14.4
30°-40°	661.5	17.1
40°-50°	674.1	17.4
50°-60°	604.2	15.6
60°-70°	473.0	12.2
70°-80°	305.0	7.9
80°-90°	90.1	2.3
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°	1063.0	27.5
0°-40°	1724.5	44.5
0°-60°	3002.8	77.6
0°-90°	3871.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3871.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1387	1387	1387	1387	1387	
5°	1373	1376	1384	1385	1387	130
15°	1306	1313	1324	1335	1336	368
25°	1181	1192	1217	1234	1241	544
35°	1011	1024	1058	1091	1102	632
45°	813	831	874	919	932	628
55°	605	625	677	724	744	542
65°	397	421	484	531	553	395
75°	202	233	298	349	367	217
85°	49	67	87	87	87	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1387.1	1387.1	1387.1	<i>1387.1</i>	1387.1
2.5°	<i>1378.1</i>	<i>1381.7</i>	<i>1388.9</i>	<i>1390.7</i>	<i>1390.7</i>
5°	1372.7	1376.3	1383.5	<i>1385.3</i>	1387.1
7.5°	1363.6	1365.4	1374.5	<i>1378.1</i>	1379.9
10°	1349.2	1352.8	1361.8	<i>1367.2</i>	1369.0
12.5°	1329.3	1334.7	1345.6	<i>1352.8</i>	1354.6
15°	1305.8	1313.0	1323.9	<i>1334.7</i>	1336.5
17.5°	1280.5	1287.8	1302.2	<i>1314.9</i>	1318.5
20°	1249.8	1258.9	1275.1	<i>1289.6</i>	1295.0
22.5°	1219.1	1226.4	1246.2	<i>1264.3</i>	1269.7
25°	1181.2	1192.0	1217.3	<i>1233.6</i>	1240.8
27.5°	1141.5	1154.1	1179.4	<i>1201.1</i>	1208.3
30°	1099.9	1112.6	1139.7	<i>1166.8</i>	1175.8
32.5°	1056.6	1071.0	1103.5	<i>1130.6</i>	1139.7
35°	1011.4	1024.1	1058.4	<i>1090.9</i>	1101.7
37.5°	964.5	975.3	1015.0	<i>1049.4</i>	1060.2
40°	913.9	928.3	969.9	<i>1009.6</i>	1020.5
42.5°	863.3	879.6	921.1	<i>964.5</i>	975.3
45°	812.8	830.8	874.2	<i>919.3</i>	932.0
47.5°	764.0	778.4	827.2	<i>870.5</i>	888.6
50°	711.6	726.1	773.0	<i>821.8</i>	839.8
52.5°	657.4	677.3	727.9	<i>774.8</i>	796.5
55°	605.1	624.9	677.3	<i>724.3</i>	744.1
57.5°	556.3	572.5	626.7	<i>675.5</i>	695.4
60°	503.9	518.4	576.2	<i>628.5</i>	646.6
62.5°	447.9	469.6	529.2	<i>578.0</i>	599.6
65°	397.3	420.8	484.0	<i>531.0</i>	552.7
67.5°	350.4	372.1	433.5	<i>484.0</i>	507.5
70°	296.2	325.1	388.3	<i>438.9</i>	460.6
72.5°	252.9	278.1	343.2	<i>393.7</i>	417.2
75°	202.3	233.0	298.0	<i>348.6</i>	366.6
77.5°	160.7	191.4	252.9	<i>292.6</i>	301.6
80°	117.4	148.1	205.9	<i>225.8</i>	231.2
82.5°	79.5	108.4	148.1	<i>153.5</i>	155.3
85°	48.8	66.8	86.7	<i>86.7</i>	86.7
87.5°	23.5	27.1	30.7	<i>28.9</i>	28.9
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)