

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: P313195

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-HRP-CA125-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: P313195
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45HE-UNV-L83050-HRP-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2999.0 lumens
Efficiency: N/A
Efficacy: 89.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

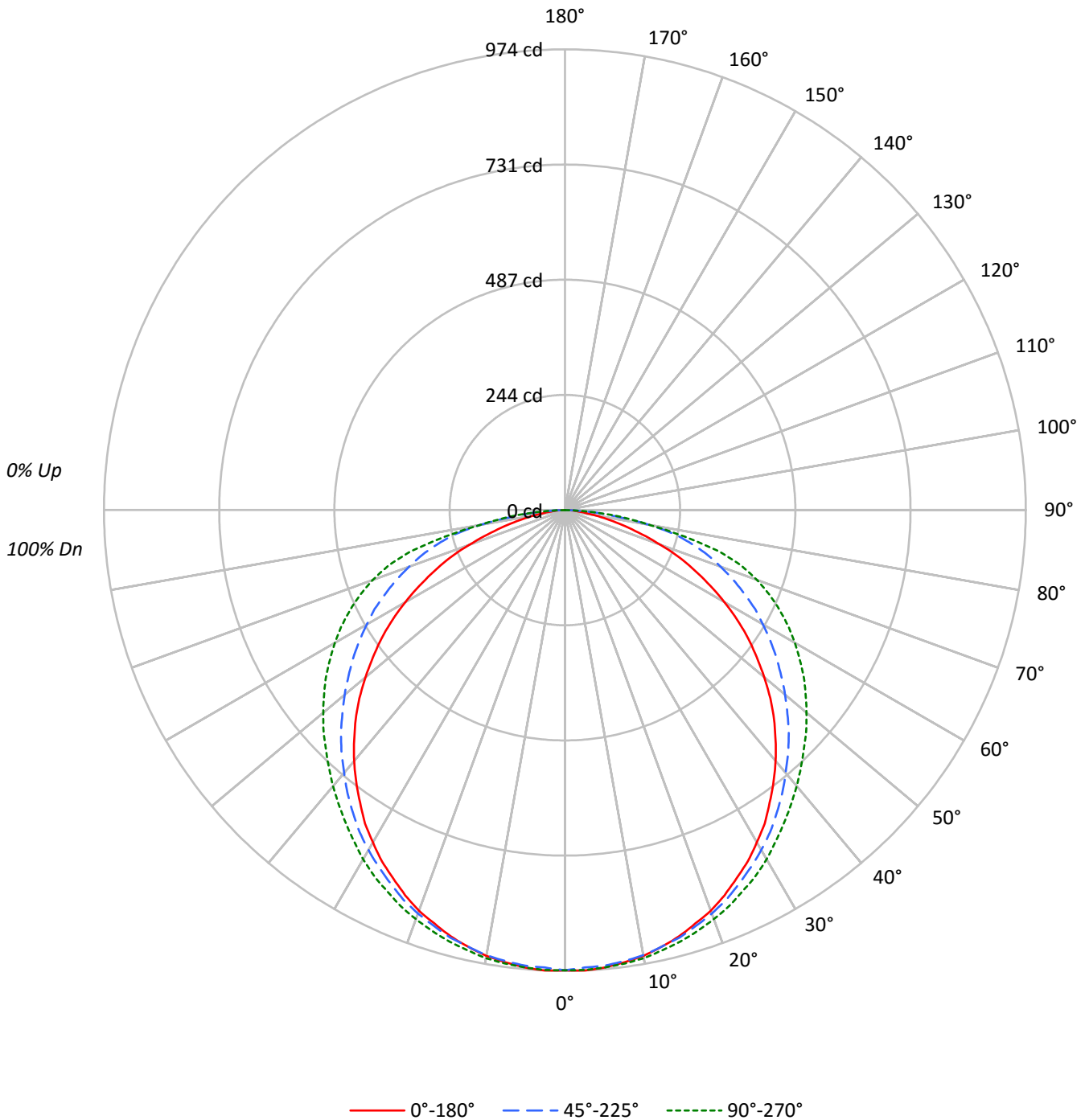
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1309	1309	1309
5°	1311	1306	1311
10°	1307	1305	1314
15°	1299	1303	1315
20°	1291	1300	1318
25°	1275	1294	1320
30°	1260	1289	1324
35°	1239	1283	1326
40°	1217	1275	1339
45°	1190	1273	1359
50°	1151	1272	1396
55°	1110	1281	1446
60°	1047	1301	1510
65°	967	1331	1595
70°	845	1378	1699
75°	685	1449	1756
80°	506	1420	1420
85°	387	1047	1183



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	3.1
10°-20°	264.7	8.8
20°-30°	403.0	13.4
30°-40°	489.3	16.3
40°-50°	516.9	17.2
50°-60°	487.8	16.3
60°-70°	405.6	13.5
70°-80°	266.8	8.9
80°-90°	72.7	2.4
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°	759.8	25.3
0°-40°	1249.1	41.7
0°-60°	2253.9	75.2
0°-90°	2999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	973	973	973	973	973	
5°	970	970	967	970	970	92
15°	933	934	935	944	944	263
25°	859	864	871	886	889	396
35°	755	763	781	801	807	472
45°	625	638	669	702	714	481
55°	473	493	546	598	616	422
65°	304	339	418	480	501	300
75°	132	192	279	330	338	142
85°	25	55	68	75	77	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	973.0	973.0	973.0	973.0	973.0
2.5°	974.3	973.0	968.0	973.0	973.0
5°	970.5	970.5	966.8	970.5	970.5
7.5°	964.2	964.2	961.7	966.8	966.8
10°	956.7	956.7	955.5	961.7	961.7
12.5°	945.4	946.7	945.4	952.9	952.9
15°	932.9	934.1	935.4	944.2	944.2
17.5°	916.5	919.0	921.6	931.6	932.9
20°	901.5	902.7	907.7	919.0	920.3
22.5°	881.4	885.1	891.4	902.7	906.5
25°	858.8	863.8	871.3	886.4	888.9
27.5°	837.4	841.2	851.2	867.6	872.6
30°	811.1	817.3	829.9	846.2	852.5
32.5°	786.0	792.2	807.3	824.9	829.9
35°	754.6	763.4	780.9	801.0	807.3
37.5°	724.4	733.2	754.6	777.2	784.7
40°	693.0	703.1	725.7	752.1	762.1
42.5°	659.1	673.0	698.1	726.9	738.2
45°	625.2	637.8	669.2	701.8	714.4
47.5°	588.8	603.9	637.8	676.7	691.8
50°	549.9	568.8	607.7	650.4	666.7
52.5°	511.0	532.3	576.3	624.0	641.6
55°	473.3	493.4	546.2	597.6	616.5
57.5°	431.9	457.0	514.8	570.0	588.8
60°	389.2	416.8	483.4	541.1	561.2
62.5°	346.5	377.9	453.2	511.0	532.3
65°	303.8	339.0	418.1	479.6	501.0
67.5°	262.4	301.3	385.4	447.0	468.3
70°	214.7	263.7	350.3	410.6	431.9
72.5°	170.8	227.2	316.4	372.9	391.7
75°	131.8	192.1	278.7	330.2	337.7
77.5°	96.7	156.9	239.8	257.4	258.6
80°	65.3	125.6	183.3	180.8	183.3
82.5°	42.7	94.2	115.5	129.3	130.6
85°	25.1	55.2	67.8	75.3	76.6
87.5°	12.6	18.8	23.9	25.1	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)