

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: P309420

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-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: P309420
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-L82765-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: 2926.0 lumens
Efficiency: N/A
Efficacy: 87.1 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

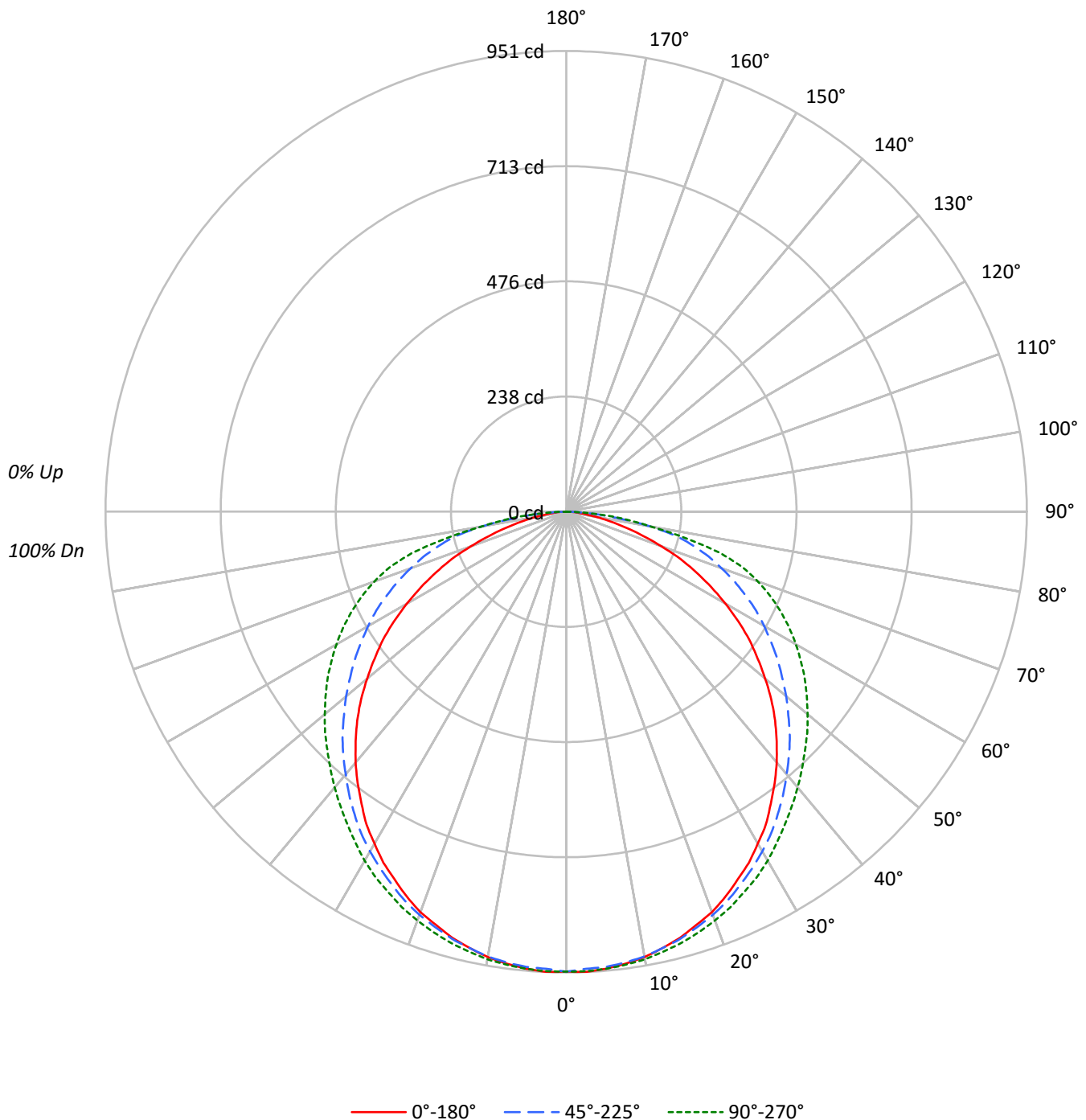
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1277	1277	1277
5°	1279	1274	1279
10°	1275	1274	1282
15°	1268	1271	1283
20°	1259	1268	1286
25°	1244	1262	1288
30°	1229	1258	1292
35°	1209	1251	1294
40°	1188	1244	1306
45°	1161	1242	1326
50°	1123	1241	1362
55°	1083	1250	1411
60°	1022	1269	1474
65°	944	1299	1556
70°	824	1345	1658
75°	669	1413	1713
80°	494	1385	1385
85°	378	1020	1153



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	3.1
10°-20°	258.3	8.8
20°-30°	393.1	13.4
30°-40°	477.4	16.3
40°-50°	504.4	17.2
50°-60°	475.9	16.3
60°-70°	395.7	13.5
70°-80°	260.3	8.9
80°-90°	71.0	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°	741.3	25.3
0°-40°	1218.7	41.7
0°-60°	2199.0	75.2
0°-90°	2926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2926.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	947	947	943	947	947	90
15°	910	911	913	921	921	257
25°	838	843	850	865	867	386
35°	736	745	762	782	788	461
45°	610	622	653	685	697	470
55°	462	481	533	583	602	411
65°	296	331	408	468	489	293
75°	129	187	272	322	330	139
85°	24	54	66	74	75	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	949.3	949.3	949.3	949.3	949.3
2.5°	950.6	949.3	944.4	949.3	949.3
5°	946.9	946.9	943.2	946.9	946.9
7.5°	940.8	940.8	938.3	943.2	943.2
10°	933.4	933.4	932.2	938.3	938.3
12.5°	922.4	923.6	922.4	929.7	929.7
15°	910.1	911.4	912.6	921.2	921.2
17.5°	894.2	896.7	899.1	908.9	910.1
20°	879.5	880.7	885.6	896.7	897.9
22.5°	859.9	863.6	869.7	880.7	884.4
25°	837.9	842.8	850.1	864.8	867.3
27.5°	817.0	820.7	830.5	846.4	851.3
30°	791.3	797.4	809.7	825.6	831.7
32.5°	766.8	772.9	787.6	804.8	809.7
35°	736.2	744.8	761.9	781.5	787.6
37.5°	706.8	715.4	736.2	758.2	765.6
40°	676.2	686.0	708.0	733.8	743.5
42.5°	643.1	656.6	681.1	709.3	720.3
45°	610.0	622.3	652.9	684.8	697.0
47.5°	574.5	589.2	622.3	660.3	675.0
50°	536.5	554.9	592.9	634.5	650.5
52.5°	498.6	519.4	562.3	608.8	626.0
55°	461.8	481.4	532.9	583.1	601.5
57.5°	421.4	445.9	502.2	556.1	574.5
60°	379.7	406.7	471.6	528.0	547.6
62.5°	338.1	368.7	442.2	498.6	519.4
65°	296.4	330.7	407.9	467.9	488.8
67.5°	256.0	294.0	376.1	436.1	456.9
70°	209.5	257.2	341.8	400.6	421.4
72.5°	166.6	221.7	308.7	363.8	382.2
75°	128.6	187.4	271.9	322.2	329.5
77.5°	94.3	153.1	234.0	251.1	252.3
80°	63.7	122.5	178.8	176.4	178.8
82.5°	41.6	91.9	112.7	126.2	127.4
85°	24.5	53.9	66.1	73.5	74.7
87.5°	12.2	18.4	23.3	24.5	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)