

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: P309334

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CA125-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: P309334
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: 24FCZ2-40HE-UNV-L82765-HRP-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 2898.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

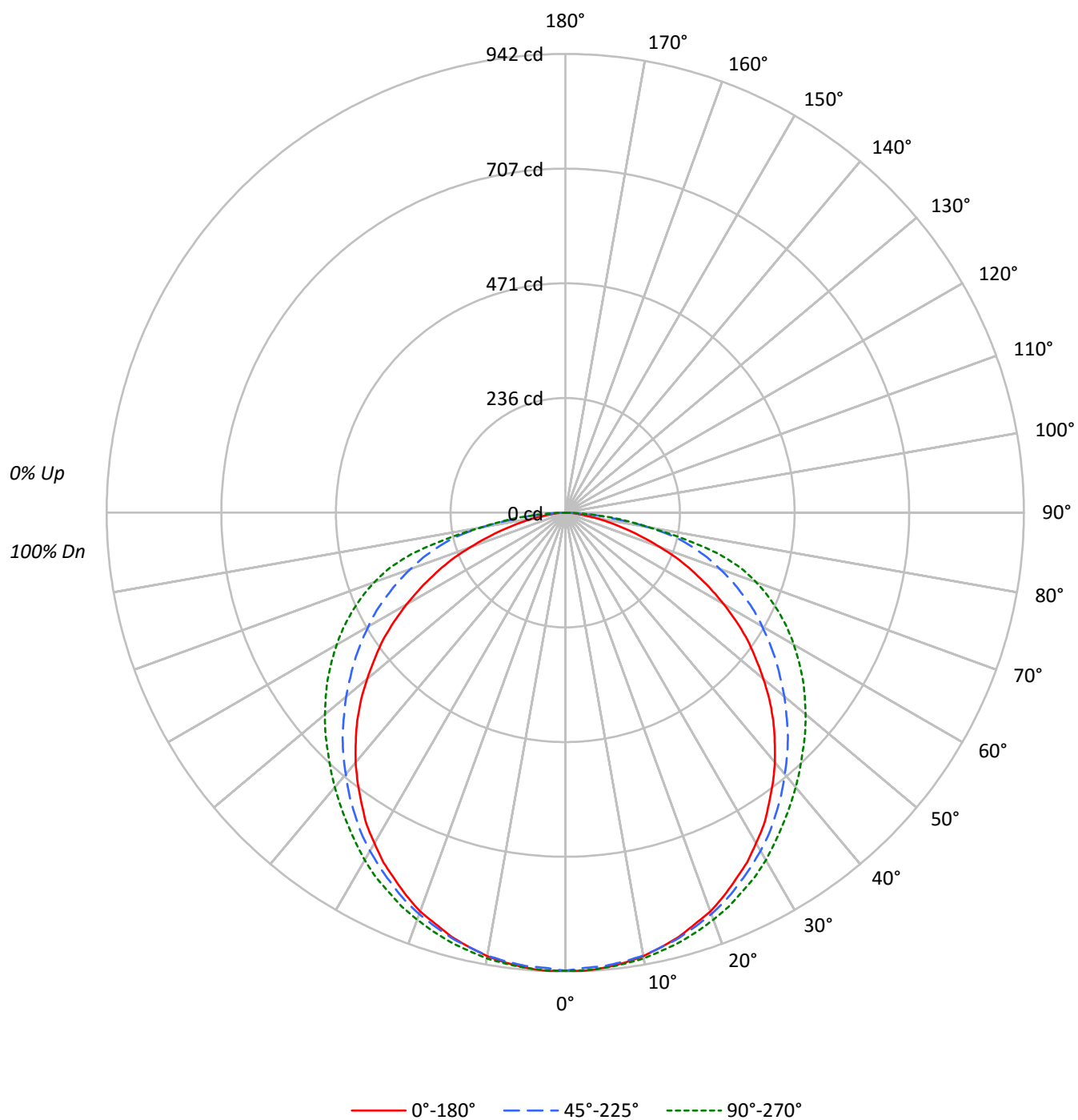
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1265	1265	1265
5°	1267	1262	1267
10°	1263	1261	1270
15°	1256	1259	1271
20°	1247	1256	1273
25°	1232	1250	1275
30°	1218	1246	1280
35°	1198	1239	1281
40°	1176	1232	1293
45°	1150	1231	1314
50°	1112	1229	1348
55°	1073	1238	1397
60°	1012	1257	1459
65°	935	1286	1541
70°	816	1332	1642
75°	662	1400	1697
80°	489	1372	1372
85°	375	1011	1142



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	3.1
10°-20°	255.8	8.8
20°-30°	389.4	13.4
30°-40°	472.8	16.3
40°-50°	499.5	17.2
50°-60°	471.4	16.3
60°-70°	391.9	13.5
70°-80°	257.8	8.9
80°-90°	70.3	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°	734.2	25.3
0°-40°	1207.1	41.7
0°-60°	2178.0	75.2
0°-90°	2898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	938	938	934	938	938	89
15°	901	903	904	912	912	254
25°	830	835	842	856	859	383
35°	729	738	755	774	780	456
45°	604	616	647	678	690	465
55°	457	477	528	578	596	407
65°	294	328	404	464	484	290
75°	127	186	269	319	326	137
85°	24	53	66	73	74	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	940.3	940.3	940.3	940.3	940.3
2.5°	941.5	940.3	935.4	940.3	940.3
5°	937.8	937.8	934.2	937.8	937.8
7.5°	931.8	931.8	929.3	934.2	934.2
10°	924.5	924.5	923.3	929.3	929.3
12.5°	913.6	914.8	913.6	920.8	920.8
15°	901.4	902.6	903.9	912.4	912.4
17.5°	885.7	888.1	890.5	900.2	901.4
20°	871.1	872.3	877.2	888.1	889.3
22.5°	851.7	855.3	861.4	872.3	876.0
25°	829.9	834.7	842.0	856.5	859.0
27.5°	809.2	812.9	822.6	838.3	843.2
30°	783.8	789.8	801.9	817.7	823.8
32.5°	759.5	765.6	780.1	797.1	801.9
35°	729.2	737.6	754.6	774.0	780.1
37.5°	700.0	708.5	729.2	751.0	758.3
40°	669.7	679.4	701.3	726.7	736.4
42.5°	636.9	650.3	674.6	702.5	713.4
45°	604.2	616.3	646.7	678.2	690.3
47.5°	569.0	583.6	616.3	653.9	668.5
50°	531.4	549.6	587.2	628.5	644.2
52.5°	493.8	514.4	556.9	603.0	620.0
55°	457.4	476.8	527.8	577.5	595.7
57.5°	417.4	441.6	497.4	550.8	569.0
60°	376.1	402.8	467.1	522.9	542.3
62.5°	334.9	365.2	438.0	493.8	514.4
65°	293.6	327.6	404.0	463.5	484.1
67.5°	253.6	291.2	372.5	431.9	452.5
70°	207.5	254.8	338.5	396.7	417.4
72.5°	165.0	219.6	305.7	360.3	378.5
75°	127.4	185.6	269.3	319.1	326.4
77.5°	93.4	151.7	231.7	248.7	249.9
80°	63.1	121.3	177.1	174.7	177.1
82.5°	41.3	91.0	111.6	125.0	126.2
85°	24.3	53.4	65.5	72.8	74.0
87.5°	12.1	18.2	23.1	24.3	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)