

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: P309474

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-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: P309474
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: 24FCZ2-45-UNV-L82765-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2900.0 lumens
Efficiency: N/A
Efficacy: 77.7 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

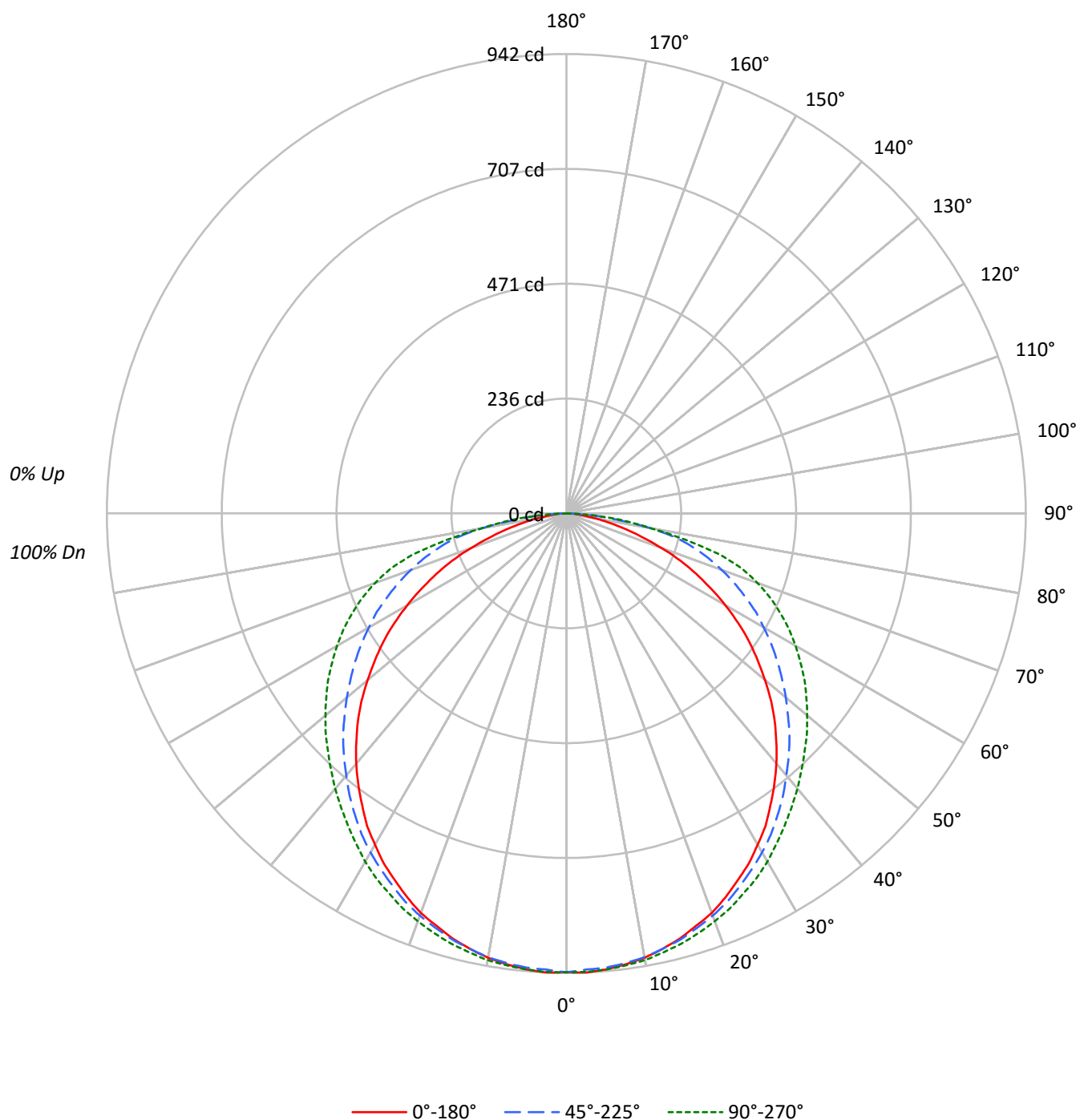
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1266	1266	1266
5°	1268	1263	1268
10°	1264	1262	1271
15°	1257	1260	1272
20°	1248	1257	1274
25°	1233	1251	1276
30°	1219	1247	1281
35°	1199	1240	1282
40°	1177	1232	1294
45°	1150	1231	1314
50°	1113	1230	1349
55°	1074	1239	1398
60°	1013	1258	1460
65°	935	1287	1542
70°	817	1332	1643
75°	663	1401	1698
80°	489	1374	1374
85°	375	1013	1144



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	3.1
10°-20°	256.0	8.8
20°-30°	389.7	13.4
30°-40°	473.1	16.3
40°-50°	499.9	17.2
50°-60°	471.7	16.3
60°-70°	392.2	13.5
70°-80°	258.0	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°	734.8	25.3
0°-40°	1207.9	41.7
0°-60°	2179.5	75.2
0°-90°	2900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	938	938	935	938	938	89
15°	902	903	904	913	913	254
25°	830	835	843	857	860	383
35°	730	738	755	775	781	457
45°	605	617	647	679	691	466
55°	458	477	528	578	596	408
65°	294	328	404	464	484	290
75°	128	186	270	319	327	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°	940.9	940.9	940.9	940.9	940.9
2.5°	942.1	940.9	936.1	940.9	940.9
5°	938.5	938.5	934.8	938.5	938.5
7.5°	932.4	932.4	930.0	934.8	934.8
10°	925.1	925.1	923.9	930.0	930.0
12.5°	914.2	915.4	914.2	921.5	921.5
15°	902.1	903.3	904.5	913.0	913.0
17.5°	886.3	888.7	891.1	900.8	902.1
20°	871.7	872.9	877.8	888.7	889.9
22.5°	852.3	855.9	862.0	872.9	876.6
25°	830.4	835.3	842.6	857.1	859.6
27.5°	809.8	813.4	823.1	838.9	843.8
30°	784.3	790.4	802.5	818.3	824.4
32.5°	760.0	766.1	780.6	797.6	802.5
35°	729.7	738.2	755.2	774.6	780.6
37.5°	700.5	709.0	729.7	751.5	758.8
40°	670.2	679.9	701.7	727.2	736.9
42.5°	637.4	650.7	675.0	702.9	713.9
45°	604.6	616.7	647.1	678.7	690.8
47.5°	569.4	584.0	616.7	654.4	669.0
50°	531.8	550.0	587.6	628.9	644.7
52.5°	494.1	514.8	557.3	603.4	620.4
55°	457.7	477.1	528.1	577.9	596.1
57.5°	417.6	441.9	497.8	551.2	569.4
60°	376.4	403.1	467.4	523.3	542.7
62.5°	335.1	365.4	438.3	494.1	514.8
65°	293.8	327.8	404.3	463.8	484.4
67.5°	253.7	291.4	372.7	432.2	452.8
70°	207.6	255.0	338.7	397.0	417.6
72.5°	165.1	219.7	305.9	360.6	378.8
75°	127.5	185.8	269.5	319.3	326.6
77.5°	93.5	151.8	231.9	248.9	250.1
80°	63.1	121.4	177.3	174.8	177.3
82.5°	41.3	91.1	111.7	125.0	126.3
85°	24.3	53.4	65.6	72.8	74.1
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)