

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: P309422

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CA125-W2A-U-4000K**

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: P309422
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 3094.0 lumens
Efficiency: N/A
Efficacy: 90.5 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

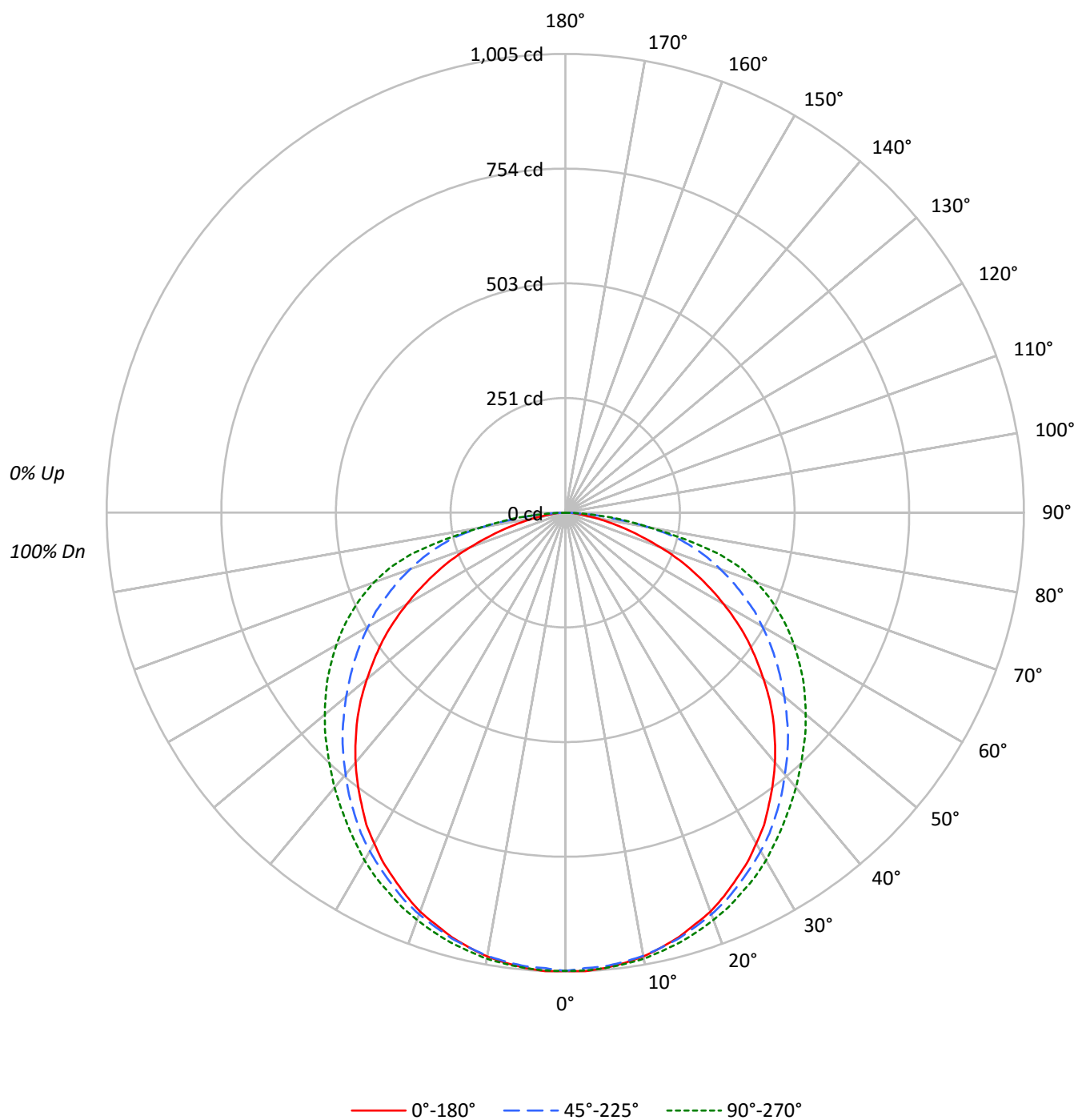
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1351	1351	1351
5°	1352	1347	1352
10°	1348	1347	1356
15°	1341	1344	1357
20°	1332	1341	1359
25°	1315	1334	1362
30°	1300	1330	1366
35°	1279	1323	1368
40°	1256	1315	1381
45°	1228	1314	1402
50°	1187	1312	1440
55°	1145	1322	1492
60°	1080	1342	1558
65°	998	1373	1645
70°	871	1422	1753
75°	707	1495	1811
80°	522	1465	1465
85°	400	1079	1220



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.1	3.1
10°-20°	273.1	8.8
20°-30°	415.7	13.4
30°-40°	504.8	16.3
40°-50°	533.3	17.2
50°-60°	503.2	16.3
60°-70°	418.4	13.5
70°-80°	275.3	8.9
80°-90°	75.0	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°	783.9	25.3
0°-40°	1288.7	41.7
0°-60°	2325.3	75.2
0°-90°	3094.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3094.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	1001	1001	997	1001	1001	95
15°	962	964	965	974	974	271
25°	886	891	899	914	917	409
35°	778	788	806	826	833	487
45°	645	658	690	724	737	497
55°	488	509	564	617	636	435
65°	314	350	431	495	517	310
75°	136	198	288	341	348	147
85°	26	57	70	78	79	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1003.9	1003.9	1003.9	1003.9	1003.9
2.5°	1005.1	1003.9	998.7	1003.9	1003.9
5°	1001.3	1001.3	997.4	1001.3	1001.3
7.5°	994.8	994.8	992.2	997.4	997.4
10°	987.0	987.0	985.7	992.2	992.2
12.5°	975.4	976.6	975.4	983.1	983.1
15°	962.4	963.7	965.0	974.1	974.1
17.5°	945.6	948.2	950.7	961.1	962.4
20°	930.0	931.3	936.5	948.2	949.4
22.5°	909.3	913.2	919.7	931.3	935.2
25°	886.0	891.2	898.9	914.5	917.1
27.5°	864.0	867.8	878.2	895.0	900.2
30°	836.8	843.2	856.2	873.0	879.5
32.5°	810.9	817.3	832.9	851.0	856.2
35°	778.5	787.5	805.7	826.4	832.9
37.5°	747.4	756.5	778.5	801.8	809.6
40°	715.0	725.4	748.7	775.9	786.2
42.5°	680.0	694.3	720.2	750.0	761.6
45°	645.1	658.0	690.4	724.1	737.0
47.5°	607.5	623.0	658.0	698.2	713.7
50°	567.3	586.8	626.9	671.0	687.8
52.5°	527.2	549.2	594.5	643.8	661.9
55°	488.3	509.0	563.5	616.6	636.0
57.5°	445.6	471.5	531.1	588.1	607.5
60°	401.5	430.0	498.7	558.3	579.0
62.5°	357.5	389.9	467.6	527.2	549.2
65°	313.5	349.7	431.3	494.8	516.8
67.5°	270.7	310.9	397.7	461.1	483.1
70°	221.5	272.0	361.4	423.6	445.6
72.5°	176.2	234.4	326.4	384.7	404.1
75°	136.0	198.2	287.6	340.7	348.4
77.5°	99.7	161.9	247.4	265.5	266.8
80°	67.4	129.5	189.1	186.5	189.1
82.5°	44.0	97.1	119.2	133.4	134.7
85°	25.9	57.0	69.9	77.7	79.0
87.5°	13.0	19.4	24.6	25.9	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)