

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: P309419

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CA125-W2A-U-2700K**

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: P309419
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-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 2844.0 lumens
Efficiency: N/A
Efficacy: 84.1 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

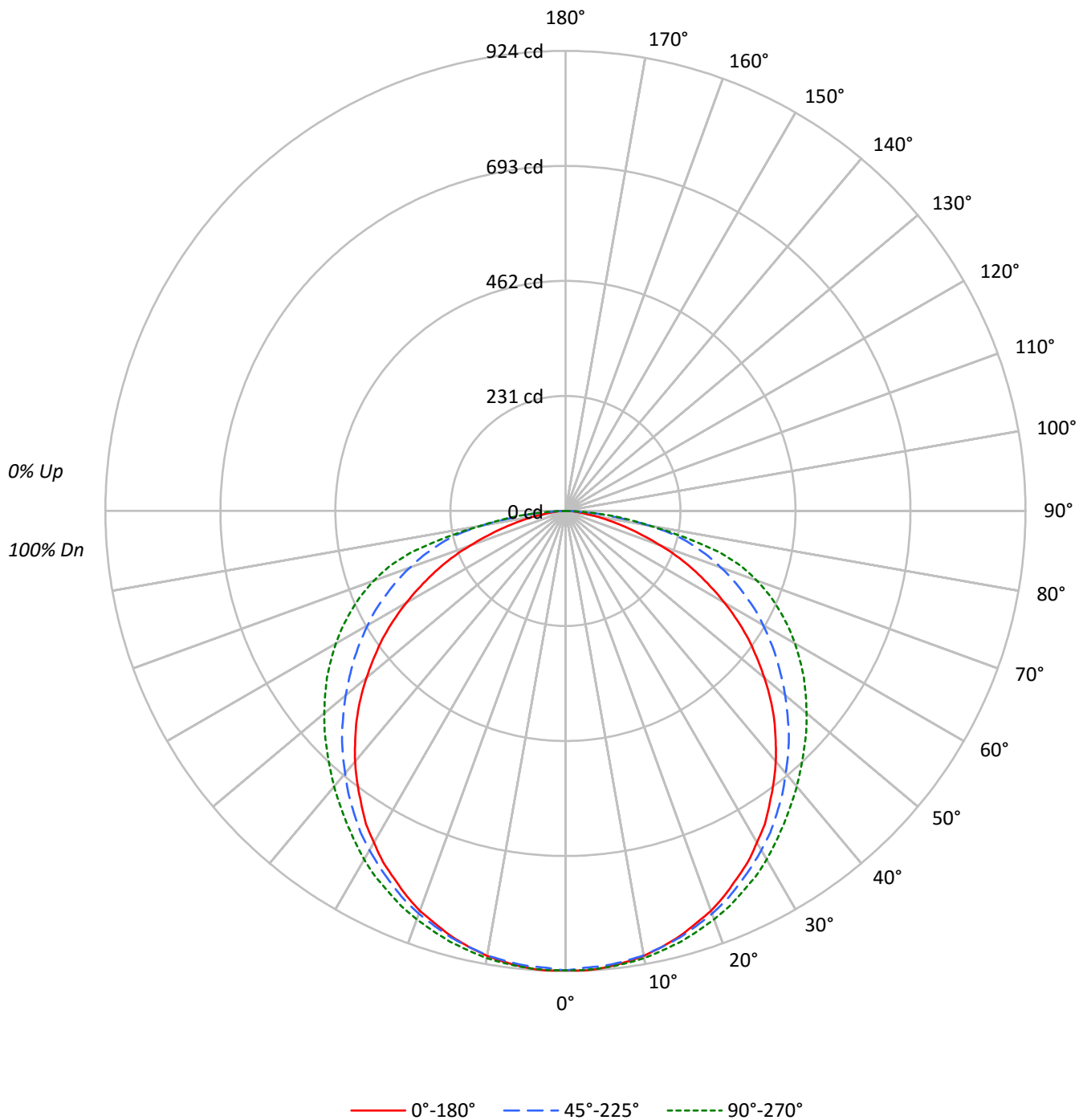
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1241	1241	1241
5°	1243	1238	1243
10°	1240	1238	1246
15°	1232	1236	1247
20°	1224	1233	1250
25°	1209	1227	1252
30°	1195	1223	1256
35°	1175	1216	1258
40°	1154	1209	1269
45°	1128	1208	1289
50°	1092	1206	1323
55°	1053	1215	1371
60°	993	1234	1432
65°	917	1262	1513
70°	801	1307	1611
75°	650	1374	1665
80°	480	1347	1347
85°	367	993	1121



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.4	3.1
10°-20°	251.0	8.8
20°-30°	382.1	13.4
30°-40°	464.0	16.3
40°-50°	490.2	17.2
50°-60°	462.6	16.3
60°-70°	384.6	13.5
70°-80°	253.0	8.9
80°-90°	69.0	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°	720.6	25.3
0°-40°	1184.6	41.7
0°-60°	2137.4	75.2
0°-90°	2844.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2844.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	923	923	923	923	923	
5°	920	920	917	920	920	87
15°	885	886	887	895	895	249
25°	814	819	826	841	843	376
35°	716	724	741	760	766	448
45°	593	605	635	666	678	457
55°	449	468	518	567	585	400
65°	288	322	396	455	475	285
75°	125	182	264	313	320	135
85°	24	52	64	71	73	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	922.7	922.7	922.7	922.7	922.7
2.5°	923.9	922.7	918.0	922.7	922.7
5°	920.4	920.4	916.8	920.4	920.4
7.5°	914.4	914.4	912.0	916.8	916.8
10°	907.3	907.3	906.1	912.0	912.0
12.5°	896.5	897.7	896.5	903.7	903.7
15°	884.6	885.8	887.0	895.4	895.4
17.5°	869.2	871.5	873.9	883.4	884.6
20°	854.9	856.1	860.8	871.5	872.7
22.5°	835.8	839.4	845.3	856.1	859.6
25°	814.4	819.2	826.3	840.6	843.0
27.5°	794.2	797.7	807.2	822.7	827.5
30°	769.1	775.1	787.0	802.5	808.4
32.5°	745.3	751.3	765.6	782.2	787.0
35°	715.6	723.9	740.6	759.6	765.6
37.5°	687.0	695.3	715.6	737.0	744.1
40°	657.2	666.8	688.2	713.2	722.7
42.5°	625.1	638.2	662.0	689.4	700.1
45°	592.9	604.8	634.6	665.6	677.5
47.5°	558.4	572.7	604.8	641.7	656.0
50°	521.5	539.4	576.3	616.7	632.2
52.5°	484.6	504.8	546.5	591.7	608.4
55°	448.9	467.9	517.9	566.7	584.6
57.5°	409.6	433.4	488.2	540.5	558.4
60°	369.1	395.3	458.4	513.2	532.2
62.5°	328.6	358.4	429.8	484.6	504.8
65°	288.1	321.5	396.5	454.8	475.1
67.5°	248.8	285.8	365.5	423.9	444.1
70°	203.6	250.0	332.2	389.3	409.6
72.5°	161.9	215.5	300.0	353.6	371.5
75°	125.0	182.2	264.3	313.1	320.3
77.5°	91.7	148.8	227.4	244.1	245.3
80°	61.9	119.1	173.8	171.5	173.8
82.5°	40.5	89.3	109.5	122.6	123.8
85°	23.8	52.4	64.3	71.4	72.6
87.5°	11.9	17.9	22.6	23.8	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)