

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: P310099

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-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: P310099
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2830.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

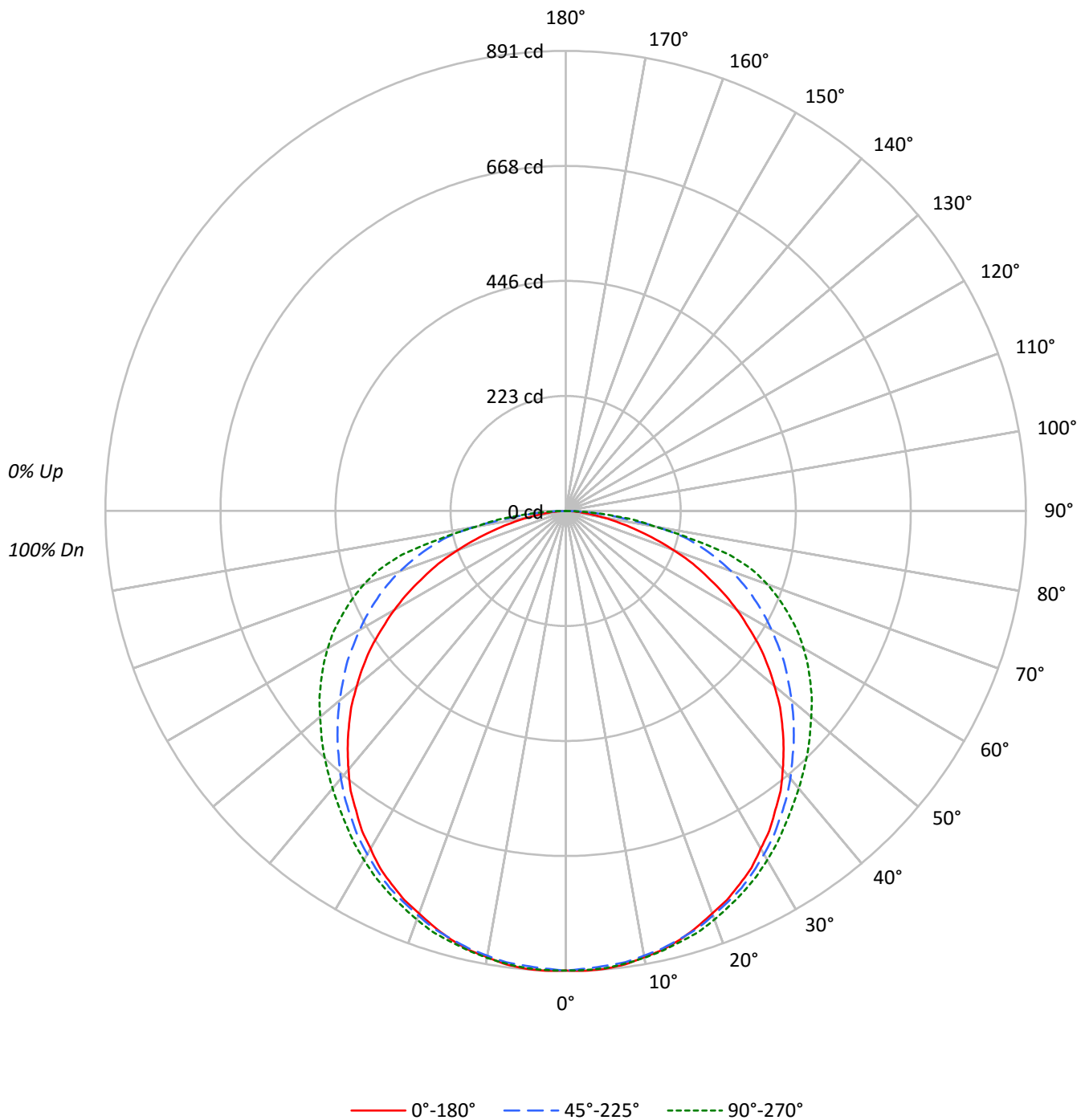
Input Watts (W): 34.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1197	1197	1197
5°	1202	1194	1200
10°	1199	1195	1201
15°	1197	1195	1203
20°	1188	1194	1206
25°	1184	1196	1209
30°	1173	1193	1213
35°	1162	1190	1217
40°	1149	1188	1233
45°	1130	1189	1261
50°	1105	1196	1299
55°	1077	1215	1357
60°	1031	1239	1432
65°	965	1283	1520
70°	878	1342	1635
75°	744	1416	1708
80°	587	1425	1382
85°	434	1084	1213



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	3.0
10°-20°	243.0	8.6
20°-30°	371.5	13.1
30°-40°	454.2	16.0
40°-50°	484.1	17.1
50°-60°	462.9	16.4
60°-70°	392.1	13.9
70°-80°	263.5	9.3
80°-90°	74.3	2.6
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°	698.9	24.7
0°-40°	1153.1	40.7
0°-60°	2100.1	74.2
0°-90°	2830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	890	889	884	889	889	85
15°	859	859	858	865	863	242
25°	797	800	806	813	814	367
35°	708	713	724	738	741	443
45°	594	604	625	651	663	458
55°	459	476	518	559	578	409
65°	303	334	403	456	477	301
75°	143	195	272	319	328	153
85°	28	58	70	76	79	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	890.0	890.0	890.0	890.0	890.0
2.5°	891.4	891.4	887.1	890.0	890.0
5°	890.0	888.6	884.3	888.6	888.6
7.5°	885.7	884.3	881.5	885.7	884.3
10°	877.3	877.3	874.5	878.7	878.7
12.5°	870.3	868.9	867.5	873.1	871.7
15°	859.1	859.1	857.7	864.7	863.3
17.5°	845.0	846.4	847.8	853.5	854.9
20°	829.6	832.4	833.8	842.2	842.2
22.5°	815.6	817.0	819.8	828.2	828.2
25°	797.3	800.1	805.7	812.7	814.2
27.5°	779.1	780.5	787.5	797.3	798.7
30°	755.2	759.4	767.8	779.1	780.5
32.5°	734.1	738.4	748.2	759.4	762.2
35°	707.5	713.1	724.3	738.4	741.2
37.5°	683.6	687.8	701.9	717.3	721.5
40°	654.1	662.6	676.6	694.8	701.9
42.5°	624.7	633.1	649.9	673.8	682.2
45°	593.8	603.6	624.7	651.3	662.6
47.5°	562.9	574.1	598.0	628.9	641.5
50°	527.8	541.8	571.3	606.4	620.4
52.5°	494.1	511.0	543.2	582.5	600.8
55°	459.0	475.9	518.0	558.7	578.3
57.5°	419.7	442.2	488.5	534.8	555.9
60°	383.2	404.3	460.4	511.0	532.0
62.5°	343.9	372.0	432.3	485.7	506.7
65°	303.2	334.1	402.9	456.2	477.3
67.5°	266.7	300.4	373.4	426.7	447.8
70°	223.2	265.3	341.1	394.4	415.5
72.5°	182.5	228.8	307.4	359.4	379.0
75°	143.2	195.1	272.3	318.6	328.5
77.5°	106.7	161.4	235.8	255.5	248.5
80°	75.8	129.1	183.9	174.1	178.3
82.5°	49.1	98.3	113.7	129.1	133.4
85°	28.1	57.6	70.2	75.8	78.6
87.5°	12.6	21.1	28.1	28.1	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)