

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: P309381

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CA125-W2A-U-5700K**

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: P309381
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: 24FCZ2-40-UNV-L82765-HRP-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 5700K 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: 2916.0 lumens
Efficiency: N/A
Efficacy: 86.8 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

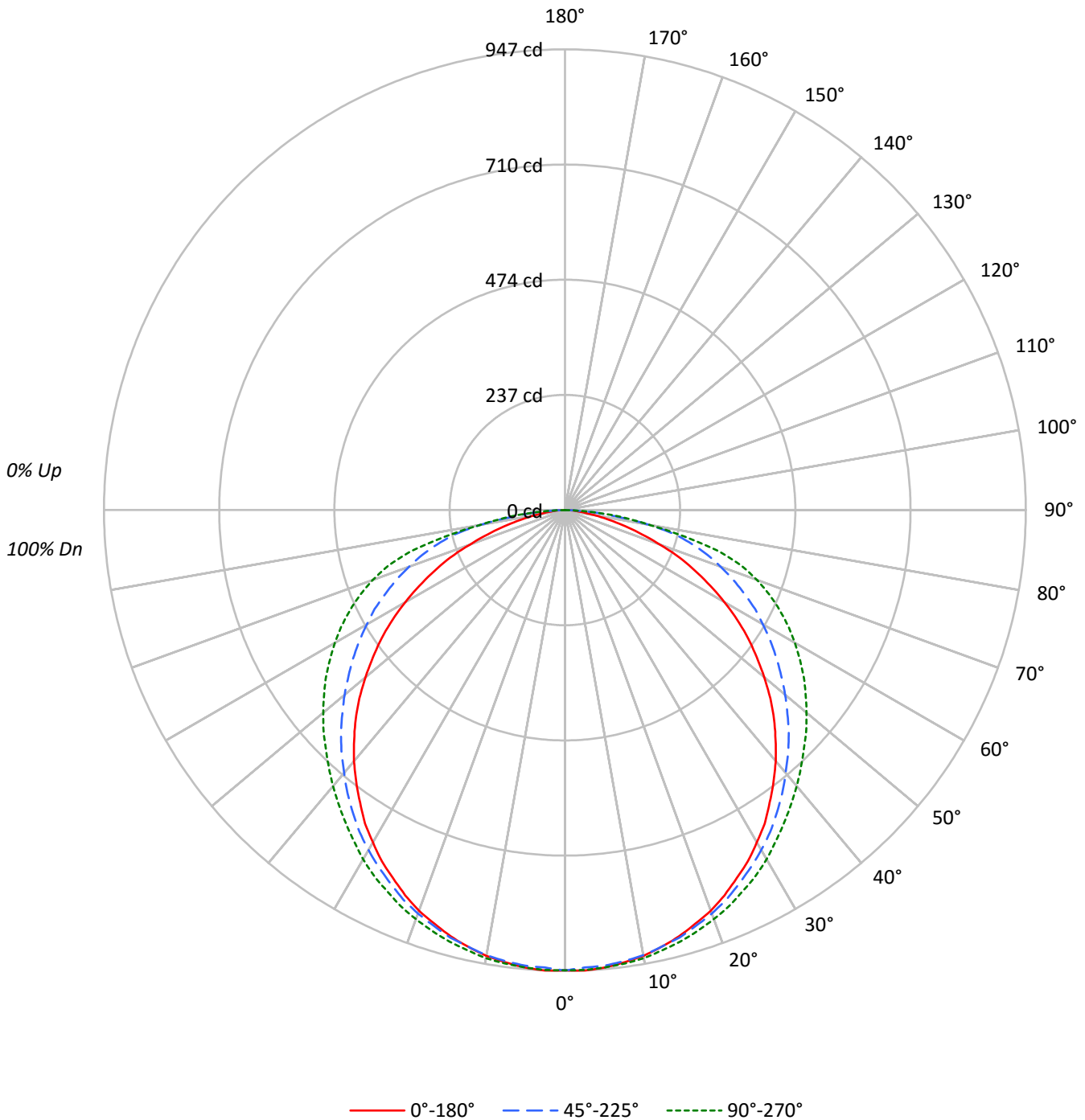
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1273	1273	1273
5°	1275	1270	1275
10°	1271	1269	1278
15°	1263	1267	1279
20°	1255	1264	1281
25°	1240	1258	1283
30°	1225	1254	1288
35°	1205	1247	1289
40°	1184	1239	1302
45°	1157	1238	1322
50°	1119	1237	1357
55°	1080	1246	1406
60°	1018	1265	1468
65°	940	1294	1551
70°	821	1340	1652
75°	666	1409	1707
80°	492	1381	1381
85°	377	1017	1150



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.6	3.1
10°-20°	257.4	8.8
20°-30°	391.8	13.4
30°-40°	475.8	16.3
40°-50°	502.6	17.2
50°-60°	474.3	16.3
60°-70°	394.4	13.5
70°-80°	259.5	8.9
80°-90°	70.7	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°	738.8	25.3
0°-40°	1214.6	41.7
0°-60°	2191.5	75.2
0°-90°	2916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	946	946	946	946	946	
5°	944	944	940	944	944	90
15°	907	908	910	918	918	256
25°	835	840	847	862	864	385
35°	734	742	759	779	785	459
45°	608	620	651	682	695	468
55°	460	480	531	581	599	410
65°	295	330	406	466	487	292
75°	128	187	271	321	328	138
85°	24	54	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°	946.1	946.1	946.1	946.1	946.1
2.5°	947.3	946.1	941.2	946.1	946.1
5°	943.7	943.7	940.0	943.7	943.7
7.5°	937.6	937.6	935.1	940.0	940.0
10°	930.2	930.2	929.0	935.1	935.1
12.5°	919.2	920.5	919.2	926.6	926.6
15°	907.0	908.3	909.5	918.0	918.0
17.5°	891.2	893.6	896.0	905.8	907.0
20°	876.5	877.7	882.6	893.6	894.8
22.5°	857.0	860.6	866.7	877.7	881.4
25°	835.0	839.9	847.2	861.9	864.3
27.5°	814.3	817.9	827.7	843.6	848.4
30°	788.6	794.7	806.9	822.8	828.9
32.5°	764.2	770.3	785.0	802.0	806.9
35°	733.7	742.2	759.3	778.9	785.0
37.5°	704.4	712.9	733.7	755.7	763.0
40°	673.9	683.6	705.6	731.2	741.0
42.5°	640.9	654.3	678.7	706.8	717.8
45°	607.9	620.2	650.7	682.4	694.6
47.5°	572.5	587.2	620.2	658.0	672.6
50°	534.7	553.0	590.9	632.4	648.2
52.5°	496.9	517.6	560.3	606.7	623.8
55°	460.2	479.8	531.0	581.1	599.4
57.5°	419.9	444.4	500.5	554.2	572.5
60°	378.4	405.3	470.0	526.2	545.7
62.5°	336.9	367.5	440.7	496.9	517.6
65°	295.4	329.6	406.5	466.3	487.1
67.5°	255.1	293.0	374.8	434.6	455.3
70°	208.8	256.4	340.6	399.2	419.9
72.5°	166.0	221.0	307.6	362.6	380.9
75°	128.2	186.8	271.0	321.1	328.4
77.5°	94.0	152.6	233.2	250.3	251.5
80°	63.5	122.1	178.2	175.8	178.2
82.5°	41.5	91.6	112.3	125.7	127.0
85°	24.4	53.7	65.9	73.2	74.5
87.5°	12.2	18.3	23.2	24.4	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)