

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: P309382

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CA125-W2A-U-6500K**

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: P309382
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 6500K 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: 2924.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

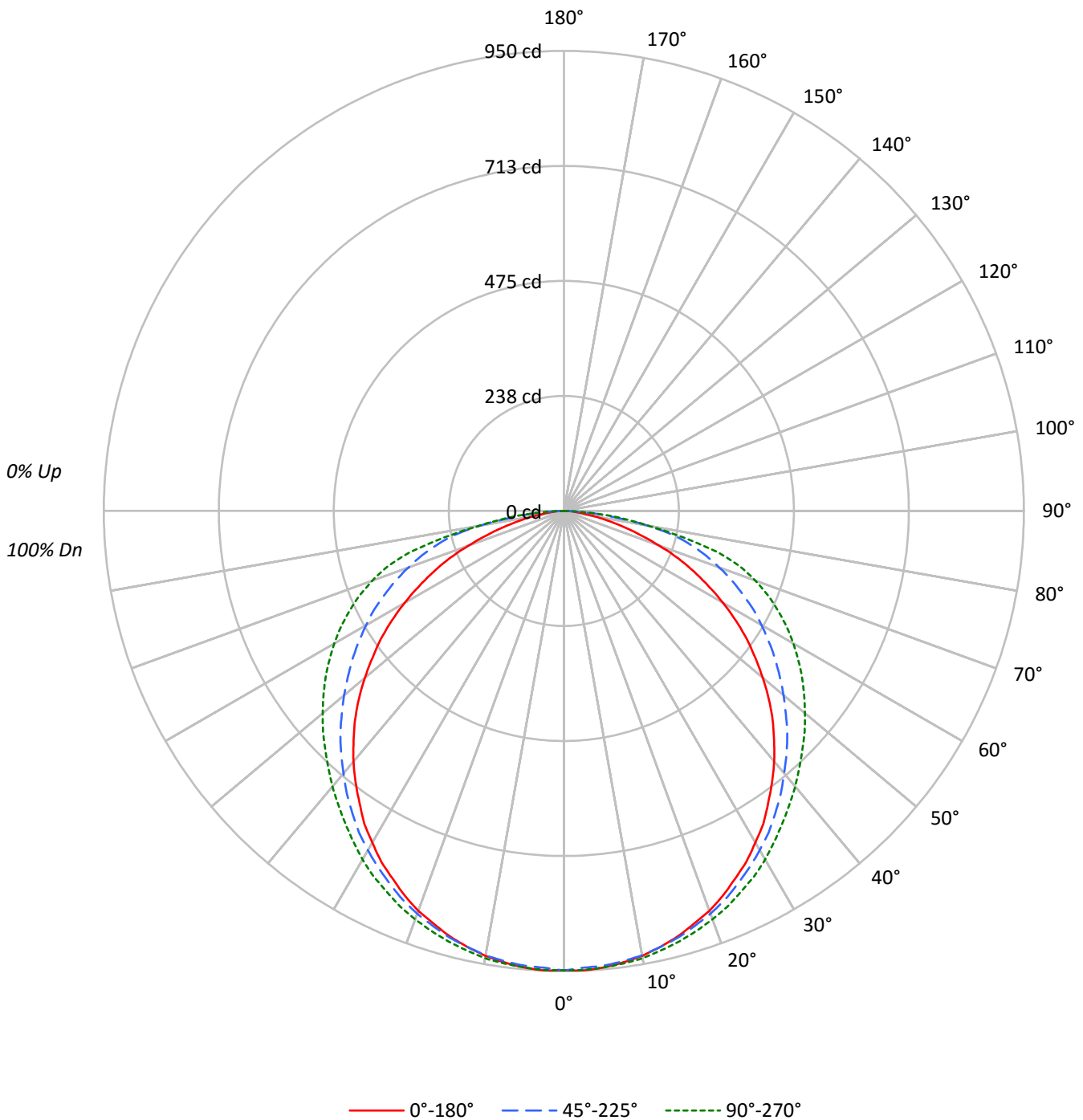
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1276	1276	1276
5°	1278	1273	1278
10°	1274	1273	1281
15°	1267	1270	1282
20°	1258	1267	1285
25°	1243	1261	1287
30°	1229	1257	1291
35°	1208	1251	1293
40°	1187	1243	1305
45°	1160	1242	1325
50°	1122	1240	1361
55°	1083	1249	1410
60°	1021	1268	1473
65°	943	1298	1555
70°	823	1343	1657
75°	668	1413	1712
80°	494	1385	1385
85°	378	1020	1153



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	3.1
10°-20°	258.1	8.8
20°-30°	392.9	13.4
30°-40°	477.1	16.3
40°-50°	504.0	17.2
50°-60°	475.6	16.3
60°-70°	395.4	13.5
70°-80°	260.2	8.9
80°-90°	70.9	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°	740.8	25.3
0°-40°	1217.9	41.7
0°-60°	2197.5	75.2
0°-90°	2924.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2924.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	946	946	943	946	946	90
15°	910	911	912	920	920	257
25°	837	842	850	864	867	386
35°	736	744	761	781	787	461
45°	610	622	652	684	696	469
55°	462	481	532	583	601	411
65°	296	330	408	468	488	293
75°	128	187	272	322	329	138
85°	24	54	66	73	75	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	948.7	948.7	948.7	948.7	948.7
2.5°	949.9	948.7	943.8	948.7	948.7
5°	946.2	946.2	942.6	946.2	946.2
7.5°	940.1	940.1	937.7	942.6	942.6
10°	932.8	932.8	931.6	937.7	937.7
12.5°	921.8	923.0	921.8	929.1	929.1
15°	909.5	910.7	912.0	920.5	920.5
17.5°	893.6	896.1	898.5	908.3	909.5
20°	878.9	880.1	885.0	896.1	897.3
22.5°	859.3	863.0	869.1	880.1	883.8
25°	837.3	842.2	849.5	864.2	866.7
27.5°	816.5	820.2	830.0	845.9	850.8
30°	790.8	796.9	809.1	825.1	831.2
32.5°	766.3	772.4	787.1	804.2	809.1
35°	735.7	744.3	761.4	781.0	787.1
37.5°	706.3	714.9	735.7	757.7	765.1
40°	675.7	685.5	707.5	733.2	743.0
42.5°	642.7	656.1	680.6	708.8	719.8
45°	609.6	621.9	652.5	684.3	696.5
47.5°	574.1	588.8	621.9	659.8	674.5
50°	536.2	554.5	592.5	634.1	650.0
52.5°	498.2	519.0	561.9	608.4	625.5
55°	461.5	481.1	532.5	582.7	601.0
57.5°	421.1	445.6	501.9	555.8	574.1
60°	379.5	406.4	471.3	527.6	547.2
62.5°	337.9	368.5	441.9	498.2	519.0
65°	296.2	330.5	407.6	467.6	488.4
67.5°	255.8	293.8	375.8	435.8	456.6
70°	209.3	257.1	341.5	400.3	421.1
72.5°	166.5	221.6	308.5	363.6	381.9
75°	128.5	187.3	271.8	321.9	329.3
77.5°	94.3	153.0	233.8	250.9	252.2
80°	63.7	122.4	178.7	176.3	178.7
82.5°	41.6	91.8	112.6	126.1	127.3
85°	24.5	53.9	66.1	73.4	74.7
87.5°	12.2	18.4	23.3	24.5	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)