

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: P309327

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CA08-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: P309327
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: 24FCZ2-40HE-UNV-L82765-HRP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 2945.0 lumens
Efficiency: N/A
Efficacy: 94.1 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

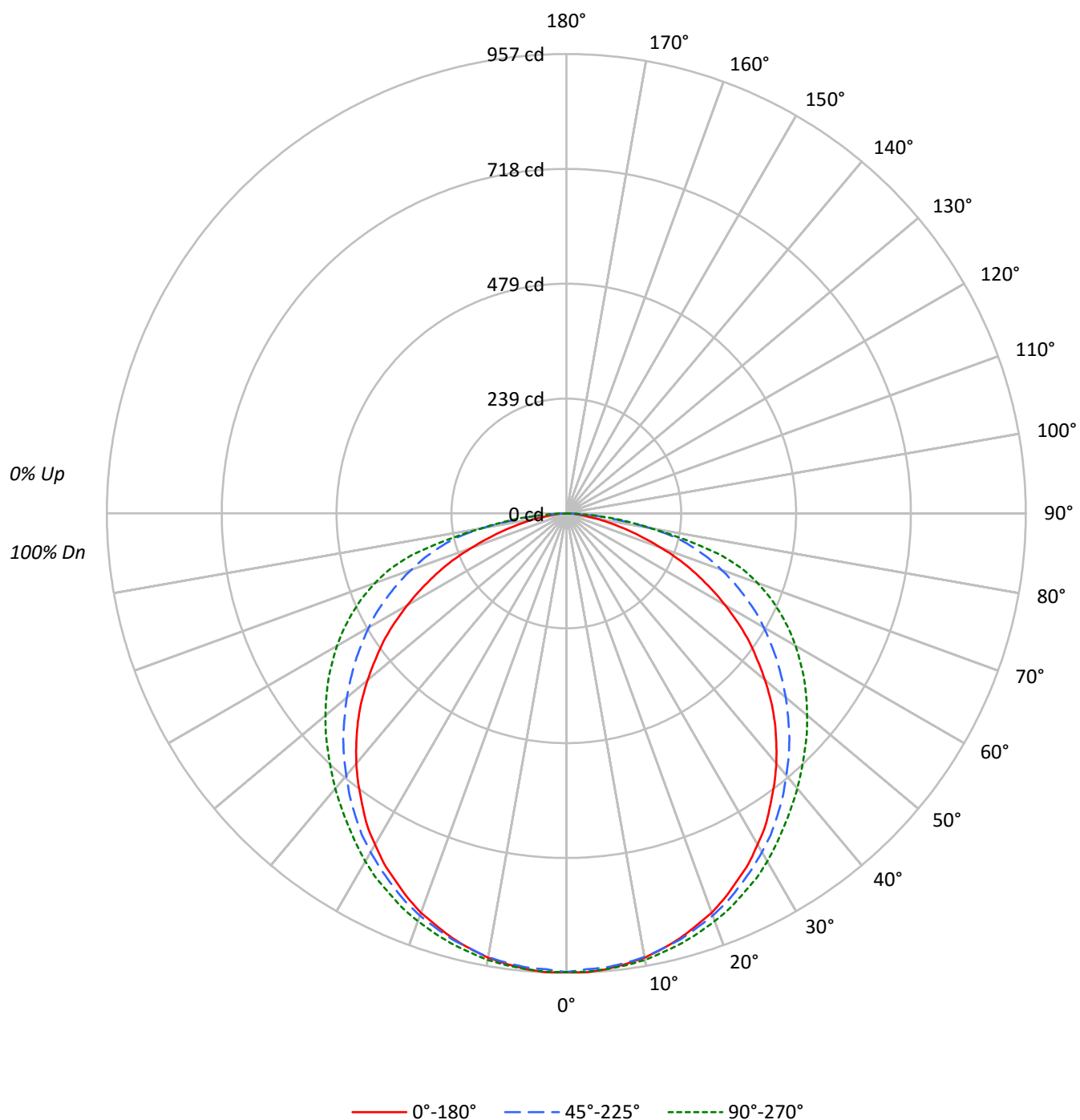
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1286	1286	1286
5°	1287	1282	1287
10°	1284	1282	1290
15°	1276	1279	1292
20°	1267	1276	1294
25°	1252	1270	1296
30°	1237	1266	1301
35°	1217	1260	1302
40°	1195	1252	1314
45°	1168	1250	1335
50°	1130	1249	1370
55°	1090	1258	1420
60°	1028	1277	1483
65°	950	1307	1566
70°	829	1353	1668
75°	673	1423	1724
80°	497	1395	1395
85°	381	1028	1161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.5	3.1
10°-20°	259.9	8.8
20°-30°	395.7	13.4
30°-40°	480.5	16.3
40°-50°	507.6	17.2
50°-60°	479.0	16.3
60°-70°	398.3	13.5
70°-80°	262.0	8.9
80°-90°	71.4	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°	746.2	25.3
0°-40°	1226.6	41.7
0°-60°	2213.3	75.2
0°-90°	2945.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2945.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	956	956	956	956	956	
5°	953	953	949	953	953	91
15°	916	917	918	927	927	258
25°	843	848	856	870	873	389
35°	741	750	767	787	793	464
45°	614	626	657	689	702	473
55°	465	484	536	587	605	414
65°	298	333	411	471	492	295
75°	130	189	274	324	332	139
85°	25	54	67	74	75	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	955.5	955.5	955.5	955.5	955.5
2.5°	956.7	955.5	950.6	955.5	955.5
5°	953.0	953.0	949.3	953.0	953.0
7.5°	946.9	946.9	944.4	949.3	949.3
10°	939.5	939.5	938.2	944.4	944.4
12.5°	928.4	929.6	928.4	935.8	935.8
15°	916.1	917.3	918.5	927.2	927.2
17.5°	900.0	902.5	905.0	914.8	916.1
20°	885.2	886.5	891.4	902.5	903.7
22.5°	865.5	869.2	875.4	886.5	890.2
25°	843.3	848.2	855.6	870.4	872.9
27.5°	822.4	826.1	835.9	851.9	856.9
30°	796.5	802.6	815.0	831.0	837.1
32.5°	771.8	778.0	792.8	810.0	815.0
35°	741.0	749.6	766.9	786.6	792.8
37.5°	711.4	720.0	741.0	763.2	770.6
40°	680.6	690.4	712.6	738.5	748.4
42.5°	647.3	660.8	685.5	713.9	725.0
45°	614.0	626.3	657.1	689.2	701.5
47.5°	578.2	593.0	626.3	664.5	679.3
50°	540.0	558.5	596.7	638.6	654.7
52.5°	501.8	522.8	565.9	612.8	630.0
55°	464.8	484.5	536.3	586.9	605.4
57.5°	424.1	448.8	505.5	559.7	578.2
60°	382.2	409.3	474.7	531.4	551.1
62.5°	340.3	371.1	445.1	501.8	522.8
65°	298.4	332.9	410.6	471.0	491.9
67.5°	257.7	295.9	378.5	438.9	459.9
70°	210.8	258.9	344.0	403.2	424.1
72.5°	167.7	223.2	310.7	366.2	384.7
75°	129.5	188.6	273.7	324.3	331.7
77.5°	94.9	154.1	235.5	252.7	254.0
80°	64.1	123.3	180.0	177.5	180.0
82.5°	41.9	92.5	113.4	127.0	128.2
85°	24.7	54.2	66.6	74.0	75.2
87.5°	12.3	18.5	23.4	24.7	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)