

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: P309328

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CA08-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: P309328
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 2952.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

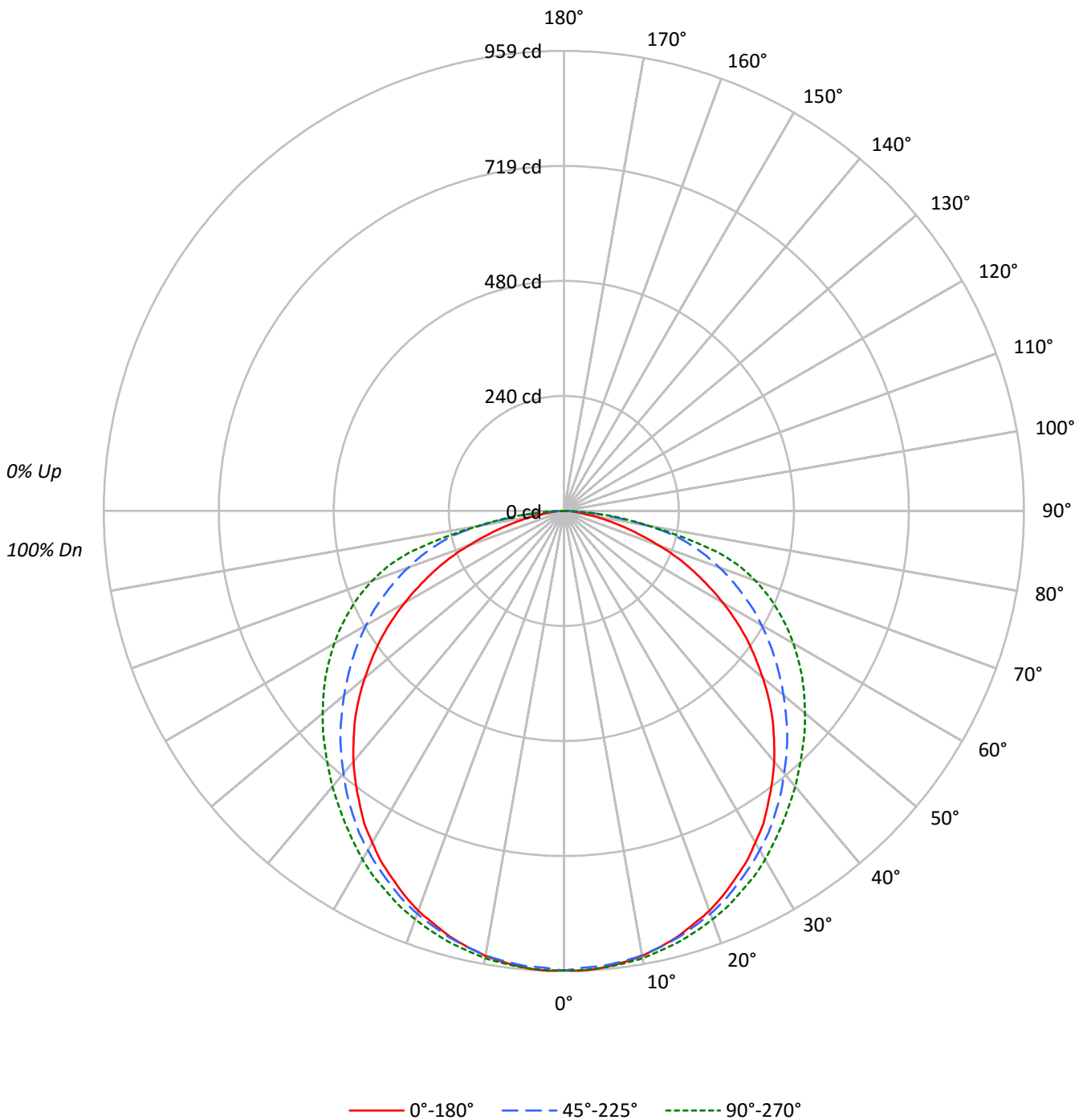
Input Watts (W): 31.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1289	1289	1289
5°	1290	1285	1290
10°	1287	1285	1293
15°	1279	1282	1295
20°	1270	1279	1297
25°	1255	1273	1299
30°	1240	1269	1304
35°	1220	1263	1305
40°	1198	1255	1318
45°	1171	1253	1338
50°	1133	1252	1374
55°	1093	1261	1423
60°	1031	1280	1486
65°	952	1310	1570
70°	831	1356	1672
75°	675	1426	1728
80°	498	1398	1398
85°	381	1030	1164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	3.1
10°-20°	260.5	8.8
20°-30°	396.7	13.4
30°-40°	481.6	16.3
40°-50°	508.8	17.2
50°-60°	480.1	16.3
60°-70°	399.2	13.5
70°-80°	262.6	8.9
80°-90°	71.6	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°	747.9	25.3
0°-40°	1229.6	41.7
0°-60°	2218.5	75.2
0°-90°	2952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2952.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	955	955	952	955	955	91
15°	918	920	921	929	929	259
25°	845	850	858	872	875	390
35°	743	751	769	788	795	465
45°	616	628	659	691	703	474
55°	466	486	538	588	607	415
65°	299	334	412	472	493	296
75°	130	189	274	325	332	140
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°	957.8	957.8	957.8	957.8	957.8
2.5°	959.0	957.8	952.8	957.8	957.8
5°	955.3	955.3	951.6	955.3	955.3
7.5°	949.1	949.1	946.7	951.6	951.6
10°	941.7	941.7	940.5	946.7	946.7
12.5°	930.6	931.8	930.6	938.0	938.0
15°	918.2	919.5	920.7	929.4	929.4
17.5°	902.2	904.6	907.1	917.0	918.2
20°	887.3	888.6	893.5	904.6	905.9
22.5°	867.6	871.3	877.4	888.6	892.3
25°	845.3	850.3	857.7	872.5	875.0
27.5°	824.3	828.0	837.9	854.0	858.9
30°	798.4	804.5	816.9	833.0	839.1
32.5°	773.6	779.8	794.6	811.9	816.9
35°	742.7	751.4	768.7	788.5	794.6
37.5°	713.1	721.7	742.7	765.0	772.4
40°	682.2	692.1	714.3	740.3	750.2
42.5°	648.8	662.4	687.1	715.6	726.7
45°	615.5	627.8	658.7	690.8	703.2
47.5°	579.6	594.4	627.8	666.1	680.9
50°	541.3	559.8	598.1	640.2	656.2
52.5°	503.0	524.0	567.3	614.2	631.5
55°	465.9	485.7	537.6	588.3	606.8
57.5°	425.1	449.8	506.7	561.1	579.6
60°	383.1	410.3	475.8	532.6	552.4
62.5°	341.1	372.0	446.1	503.0	524.0
65°	299.1	333.7	411.5	472.1	493.1
67.5°	258.3	296.6	379.4	440.0	461.0
70°	211.3	259.5	344.8	404.1	425.1
72.5°	168.1	223.7	311.4	367.0	385.6
75°	129.8	189.1	274.4	325.0	332.4
77.5°	95.2	154.5	236.0	253.3	254.6
80°	64.3	123.6	180.4	178.0	180.4
82.5°	42.0	92.7	113.7	127.3	128.5
85°	24.7	54.4	66.7	74.2	75.4
87.5°	12.4	18.5	23.5	24.7	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)