

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: P310038

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP250-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: P310038
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: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 2423.0 lumens
Efficiency: N/A
Efficacy: 77.4 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

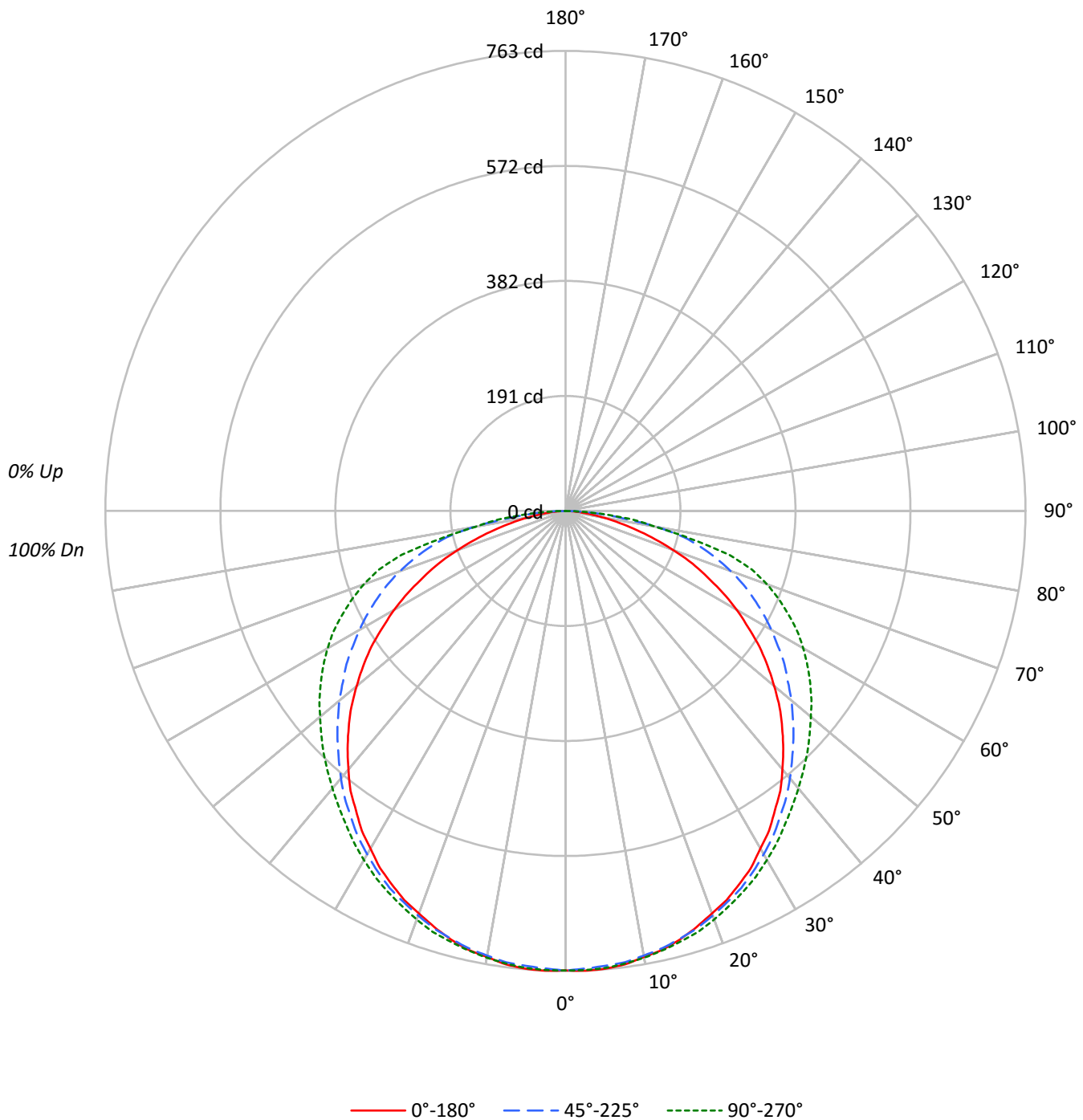
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	1025	1025	1025
5°	1029	1023	1028
10°	1026	1023	1028
15°	1025	1023	1030
20°	1017	1022	1032
25°	1013	1024	1035
30°	1005	1021	1038
35°	995	1019	1042
40°	984	1017	1055
45°	967	1018	1079
50°	946	1024	1112
55°	922	1040	1162
60°	883	1061	1226
65°	826	1098	1301
70°	752	1149	1399
75°	637	1212	1462
80°	503	1220	1182
85°	371	928	1039



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	3.0
10°-20°	208.0	8.6
20°-30°	318.1	13.1
30°-40°	388.9	16.0
40°-50°	414.5	17.1
50°-60°	396.3	16.4
60°-70°	335.7	13.9
70°-80°	225.6	9.3
80°-90°	63.6	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°	598.4	24.7
0°-40°	987.3	40.7
0°-60°	1798.0	74.2
0°-90°	2423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2423.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	762	761	757	761	761	72
15°	736	736	734	740	739	207
25°	683	685	690	696	697	315
35°	606	610	620	632	635	379
45°	508	517	535	558	567	392
55°	393	407	444	478	495	350
65°	260	286	345	391	409	258
75°	123	167	233	273	281	131
85°	24	49	60	65	67	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	762.0	762.0	762.0	762.0	762.0
2.5°	763.2	763.2	759.6	762.0	762.0
5°	762.0	760.8	757.2	760.8	760.8
7.5°	758.4	757.2	754.8	758.4	757.2
10°	751.1	751.1	748.7	752.3	752.3
12.5°	745.1	743.9	742.7	747.5	746.3
15°	735.5	735.5	734.3	740.3	739.1
17.5°	723.5	724.7	725.9	730.7	731.9
20°	710.3	712.7	713.9	721.1	721.1
22.5°	698.3	699.5	701.9	709.1	709.1
25°	682.6	685.0	689.9	695.9	697.1
27.5°	667.0	668.2	674.2	682.6	683.8
30°	646.6	650.2	657.4	667.0	668.2
32.5°	628.6	632.2	640.6	650.2	652.6
35°	605.7	610.5	620.1	632.2	634.6
37.5°	585.3	588.9	600.9	614.1	617.7
40°	560.1	567.3	579.3	594.9	600.9
42.5°	534.8	542.0	556.5	576.9	584.1
45°	508.4	516.8	534.8	557.7	567.3
47.5°	481.9	491.6	512.0	538.4	549.2
50°	451.9	463.9	489.1	519.2	531.2
52.5°	423.0	437.5	465.1	498.8	514.4
55°	393.0	407.4	443.5	478.3	495.2
57.5°	359.3	378.6	418.2	457.9	475.9
60°	328.1	346.1	394.2	437.5	455.5
62.5°	294.4	318.5	370.2	415.8	433.9
65°	259.6	286.0	344.9	390.6	408.6
67.5°	228.3	257.2	319.7	365.4	383.4
70°	191.1	227.1	292.0	337.7	355.7
72.5°	156.2	195.9	263.2	307.7	324.5
75°	122.6	167.1	233.2	272.8	281.2
77.5°	91.3	138.2	201.9	218.7	212.7
80°	64.9	110.6	157.4	149.0	152.6
82.5°	42.1	84.1	97.3	110.6	114.2
85°	24.0	49.3	60.1	64.9	67.3
87.5°	10.8	18.0	24.0	24.0	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)