

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: P310174

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP250-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: P310174
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: 24FCZ2-45-UNV-L82765-RDP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 2703.0 lumens
Efficiency: N/A
Efficacy: 68.8 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

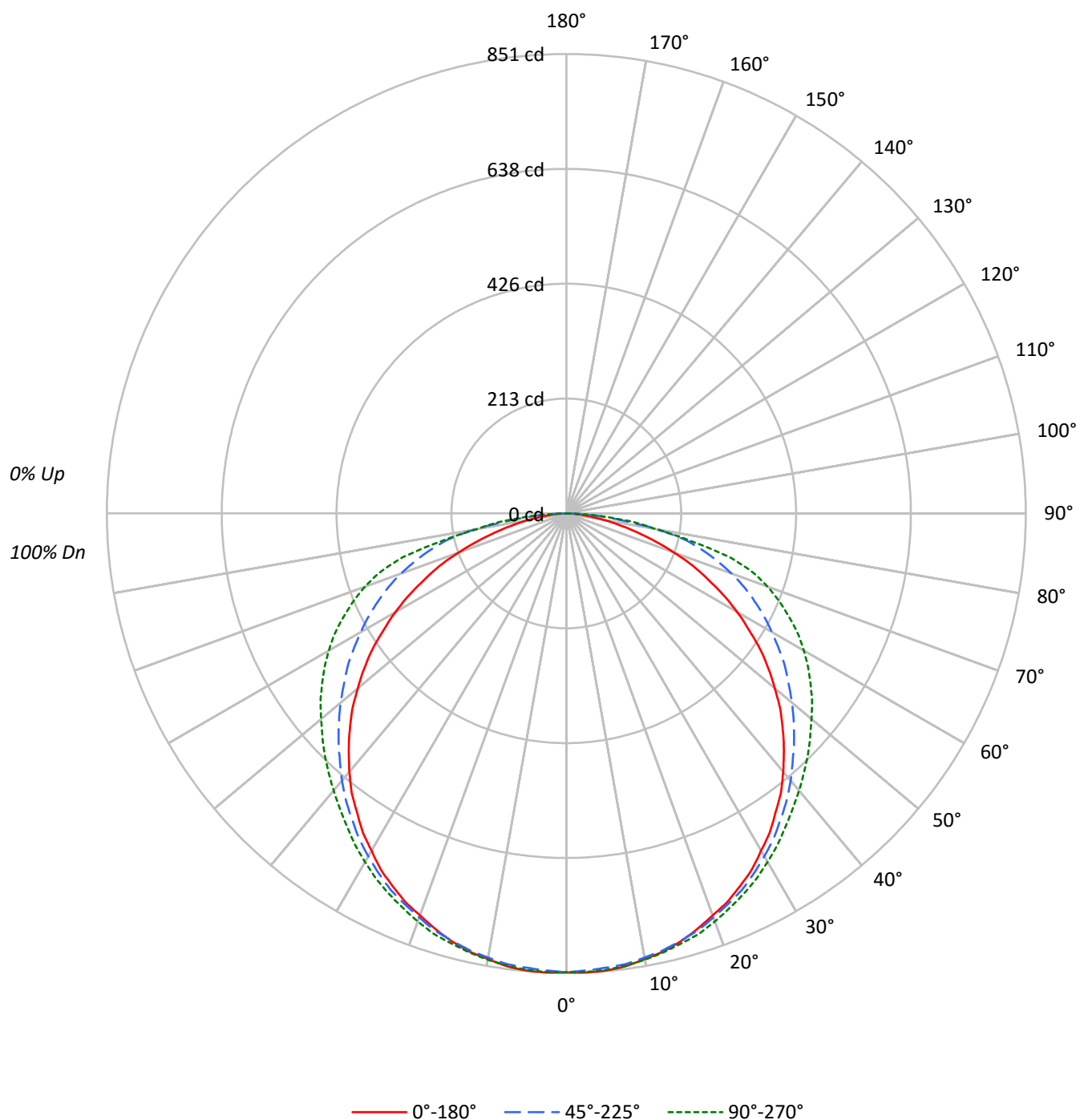
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1144	1144	1144
5°	1148	1141	1146
10°	1145	1141	1147
15°	1143	1141	1148
20°	1135	1140	1152
25°	1131	1143	1154
30°	1121	1139	1158
35°	1110	1136	1163
40°	1097	1135	1177
45°	1079	1135	1204
50°	1055	1142	1240
55°	1028	1160	1296
60°	985	1183	1367
65°	922	1225	1451
70°	839	1282	1561
75°	711	1352	1631
80°	561	1361	1320
85°	414	1034	1159



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.6	3.0
10°-20°	232.1	8.6
20°-30°	354.9	13.1
30°-40°	433.8	16.0
40°-50°	462.4	17.1
50°-60°	442.1	16.4
60°-70°	374.5	13.9
70°-80°	251.7	9.3
80°-90°	71.0	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°	667.6	24.7
0°-40°	1101.4	40.7
0°-60°	2005.8	74.2
0°-90°	2703.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2703.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	850	850	850	850	850	
5°	850	849	845	849	849	81
15°	820	820	819	826	824	231
25°	762	764	770	776	778	351
35°	676	681	692	705	708	423
45°	567	576	597	622	633	437
55°	438	454	495	534	552	390
65°	290	319	385	436	456	288
75°	137	186	260	304	314	146
85°	27	55	67	72	75	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	850.0	850.0	850.0	850.0	850.0
2.5°	851.4	851.4	847.3	850.0	850.0
5°	850.0	848.7	844.7	848.7	848.7
7.5°	846.0	844.7	842.0	846.0	844.7
10°	837.9	837.9	835.3	839.3	839.3
12.5°	831.2	829.9	828.6	833.9	832.6
15°	820.5	820.5	819.2	825.9	824.5
17.5°	807.1	808.5	809.8	815.2	816.5
20°	792.4	795.0	796.4	804.4	804.4
22.5°	779.0	780.3	783.0	791.0	791.0
25°	761.5	764.2	769.6	776.3	777.6
27.5°	744.1	745.4	752.1	761.5	762.9
30°	721.3	725.3	733.4	744.1	745.4
32.5°	701.2	705.2	714.6	725.3	728.0
35°	675.7	681.1	691.8	705.2	707.9
37.5°	652.9	657.0	670.4	685.1	689.1
40°	624.8	632.8	646.2	663.7	670.4
42.5°	596.6	604.7	620.8	643.5	651.6
45°	567.1	576.5	596.6	622.1	632.8
47.5°	537.6	548.4	571.1	600.6	612.7
50°	504.1	517.5	545.7	579.2	592.6
52.5°	471.9	488.0	518.9	556.4	573.8
55°	438.4	454.5	494.7	533.6	552.4
57.5°	400.9	422.3	466.6	510.8	530.9
60°	366.0	386.1	439.8	488.0	508.1
62.5°	328.5	355.3	412.9	463.9	484.0
65°	289.6	319.1	384.8	435.7	455.8
67.5°	254.7	286.9	356.6	407.6	427.7
70°	213.2	253.4	325.8	376.7	396.9
72.5°	174.3	218.5	293.6	343.2	362.0
75°	136.8	186.4	260.1	304.3	313.7
77.5°	101.9	154.2	225.2	244.0	237.3
80°	72.4	123.3	175.6	166.2	170.3
82.5°	46.9	93.9	108.6	123.3	127.4
85°	26.8	55.0	67.0	72.4	75.1
87.5°	12.1	20.1	26.8	26.8	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)