

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: P307019

Luminaire Tested: **14FCZ2-20-UNV-L82765-HRP-CP250-W2A-U-4000K**

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: P307019
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L82765-HRP-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 1412.0 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

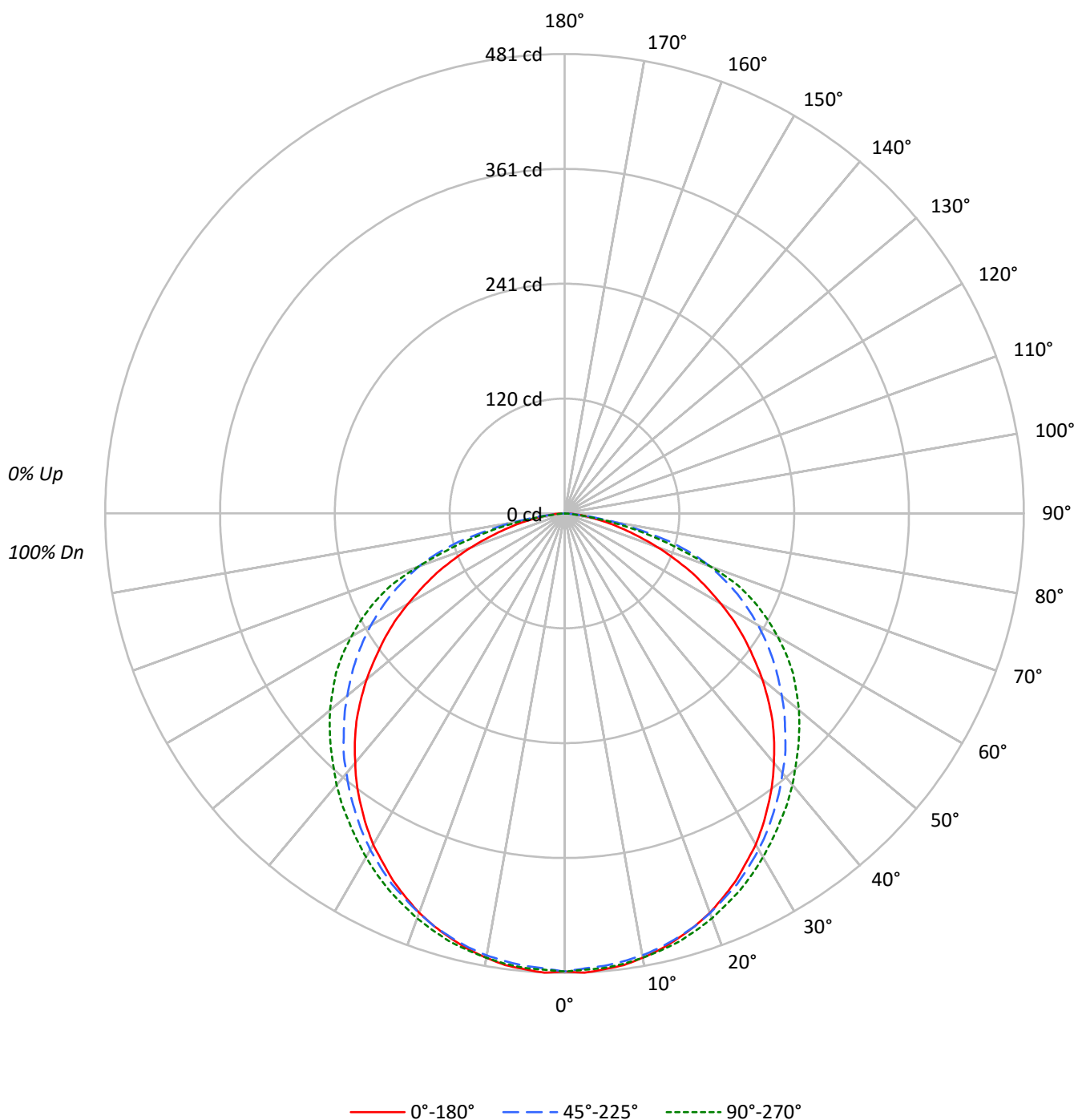
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91		93	91	88		84
2	99	90	83	78	96	88	82	77	85	79	75		82	77	73		69
3	90	79	71	64	87	77	70	64	74	68	62		72	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		64	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	69	56	47	40	68	55	46	40	53	45	40		51	45	39		37
7	64	51	42	36	63	50	41	35	48	41	35		47	40	35		33
8	60	46	38	32	58	45	37	32	44	37	31		43	36	31		29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		26
10	52	39	31	26	51	38	31	26	37	30	26		37	30	25		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1290	1290	1290
5°	1294	1284	1290
10°	1291	1284	1291
15°	1283	1280	1293
20°	1274	1275	1292
25°	1260	1271	1292
30°	1244	1264	1291
35°	1222	1254	1294
40°	1198	1248	1304
45°	1173	1244	1318
50°	1132	1243	1342
55°	1083	1250	1371
60°	1018	1259	1389
65°	939	1272	1396
70°	817	1275	1286
75°	674	1186	1039
80°	530	854	694
85°	411	330	164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	3.2
10°-20°	130.3	9.2
20°-30°	197.8	14.0
30°-40°	239.7	17.0
40°-50°	252.6	17.9
50°-60°	235.8	16.7
60°-70°	188.4	13.3
70°-80°	103.7	7.3
80°-90°	18.3	1.3
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°	373.5	26.5
0°-40°	613.2	43.4
0°-60°	1101.5	78.0
0°-90°	1412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1412.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	479	478	476	479	478	46
15°	460	460	460	464	464	130
25°	424	425	428	434	435	195
35°	372	376	382	392	394	233
45°	308	314	327	341	346	237
55°	231	242	266	285	292	206
65°	147	166	200	216	219	145
75°	65	93	114	103	100	70
85°	13	17	11	7	5	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	479.5	479.5	479.5	479.5	479.5
2.5°	481.3	480.0	476.9	479.5	478.2
5°	479.1	477.7	475.5	478.6	477.7
7.5°	476.9	475.1	472.9	476.4	475.5
10°	472.4	471.1	469.8	472.9	472.4
12.5°	467.1	466.6	465.3	468.9	468.4
15°	460.4	460.4	459.5	464.0	464.0
17.5°	453.3	452.9	453.3	458.2	457.8
20°	444.9	444.9	445.3	451.1	451.1
22.5°	434.7	435.1	436.5	443.6	443.1
25°	424.5	425.4	428.0	434.2	435.1
27.5°	412.0	414.3	417.4	424.9	425.8
30°	400.5	401.8	406.7	413.8	415.6
32.5°	386.7	389.4	394.7	402.7	404.9
35°	372.1	375.6	381.8	391.6	393.8
37.5°	357.4	360.5	369.0	379.2	383.2
40°	341.0	346.3	355.2	366.7	371.2
42.5°	325.0	330.3	342.3	354.3	358.3
45°	308.1	313.9	326.8	341.4	346.3
47.5°	289.5	296.1	312.6	328.1	333.4
50°	270.4	278.8	297.0	314.4	320.6
52.5°	250.4	261.1	281.9	300.1	305.9
55°	230.9	242.4	266.4	285.0	292.2
57.5°	210.9	223.3	250.4	271.7	275.7
60°	189.1	204.2	234.0	252.6	258.0
62.5°	167.8	185.1	217.1	234.9	239.3
65°	147.4	166.1	199.8	216.2	219.3
67.5°	125.2	147.4	180.7	195.8	196.7
70°	103.9	129.6	162.1	169.2	163.4
72.5°	83.0	110.6	140.3	134.5	129.6
75°	64.8	92.8	114.1	102.6	99.9
77.5°	48.0	75.9	81.7	75.5	70.6
80°	34.2	59.9	55.1	47.1	44.8
82.5°	23.5	37.7	30.2	23.5	20.4
85°	13.3	16.9	10.7	6.7	5.3
87.5°	5.8	4.0	2.2	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)