

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: P309017

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA125-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: P309017
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L82765-S-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3247.0 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

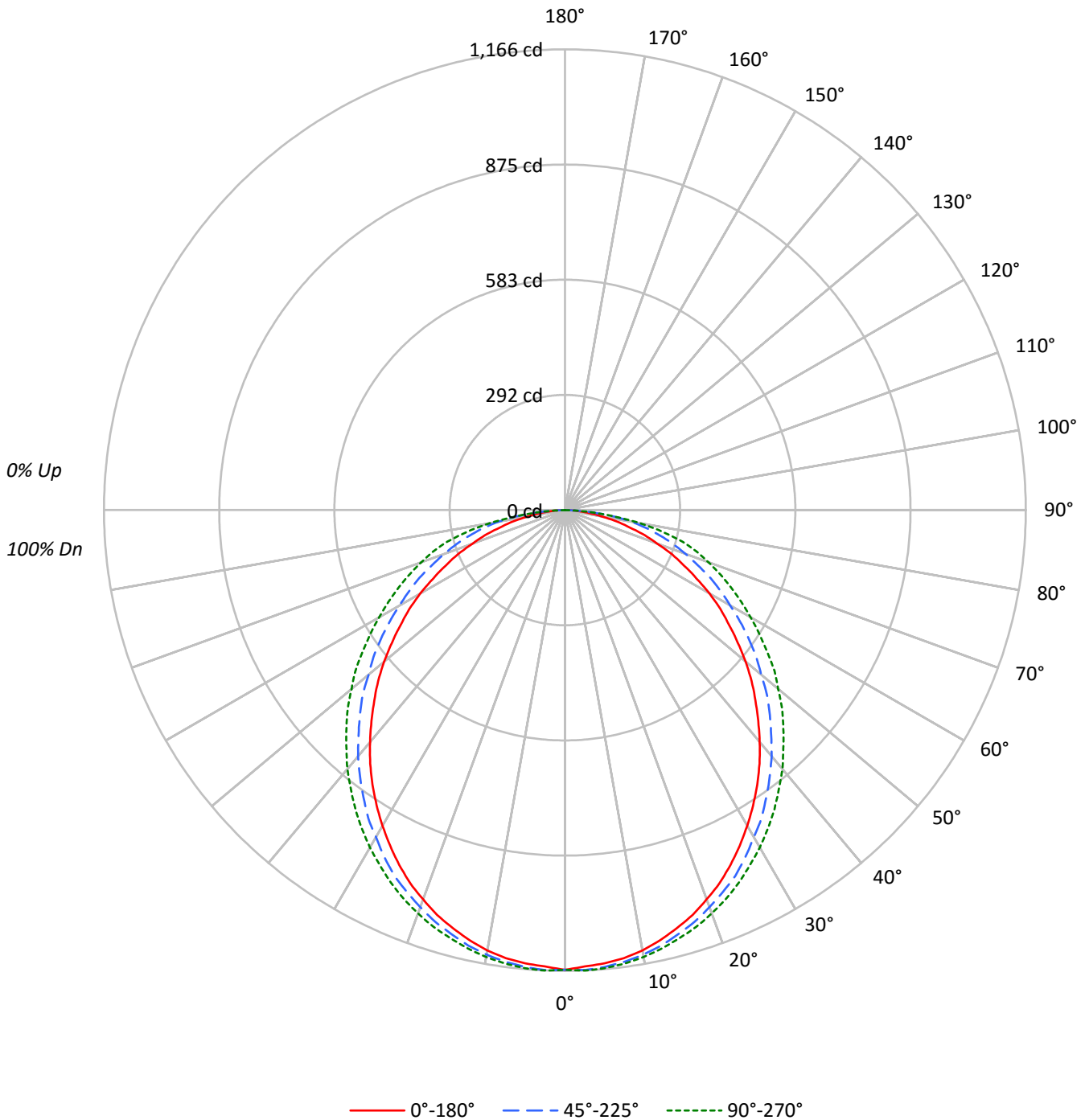
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3131	3131	3131
5°	3110	3135	3143
10°	3092	3121	3138
15°	3051	3094	3123
20°	3002	3063	3111
25°	2942	3032	3090
30°	2867	2970	3064
35°	2787	2916	3036
40°	2693	2858	3007
45°	2594	2790	2975
50°	2499	2714	2949
55°	2381	2665	2928
60°	2275	2601	2919
65°	2122	2585	2952
70°	1955	2563	3039
75°	1764	2599	3197
80°	1526	2676	3005
85°	1263	2245	2245



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.4
10°-20°	313.1	9.6
20°-30°	468.5	14.4
30°-40°	554.8	17.1
40°-50°	565.5	17.4
50°-60°	506.8	15.6
60°-70°	396.8	12.2
70°-80°	255.9	7.9
80°-90°	75.6	2.3
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°	891.7	27.5
0°-40°	1446.5	44.5
0°-60°	2518.8	77.6
0°-90°	3247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3247.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1164	1164	1164	1164	1164	
5°	1151	1154	1160	1162	1164	109
15°	1095	1101	1110	1120	1121	309
25°	991	1000	1021	1035	1041	456
35°	848	859	888	915	924	530
45°	682	697	733	771	782	526
55°	508	524	568	608	624	455
65°	333	353	406	445	464	331
75°	170	195	250	292	308	182
85°	41	56	73	73	73	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1163.5	1163.5	1163.5	1163.5	1163.5
2.5°	1155.9	1159.0	1165.0	1166.5	1166.5
5°	1151.4	1154.4	1160.5	1162.0	1163.5
7.5°	1143.8	1145.3	1152.9	1155.9	1157.4
10°	1131.7	1134.7	1142.3	1146.8	1148.4
12.5°	1115.0	1119.6	1128.7	1134.7	1136.2
15°	1095.3	1101.4	1110.5	1119.6	1121.1
17.5°	1074.1	1080.2	1092.3	1102.9	1105.9
20°	1048.4	1055.9	1069.6	1081.7	1086.2
22.5°	1022.6	1028.7	1045.3	1060.5	1065.0
25°	990.8	999.9	1021.1	1034.7	1040.8
27.5°	957.5	968.1	989.3	1007.5	1013.5
30°	922.6	933.2	955.9	978.7	986.2
32.5°	886.3	898.4	925.7	948.4	955.9
35°	848.4	859.0	887.8	915.0	924.1
37.5°	809.0	818.1	851.4	880.2	889.3
40°	766.6	778.7	813.5	846.9	856.0
42.5°	724.2	737.8	772.6	809.0	818.1
45°	681.7	696.9	733.2	771.1	781.7
47.5°	640.8	653.0	693.9	730.2	745.4
50°	596.9	609.0	648.4	689.3	704.5
52.5°	551.5	568.1	610.5	649.9	668.1
55°	507.5	524.2	568.1	607.5	624.2
57.5°	466.6	480.2	525.7	566.6	583.3
60°	422.7	434.8	483.3	527.2	542.4
62.5°	375.7	393.9	443.9	484.8	503.0
65°	333.3	353.0	406.0	445.4	463.6
67.5°	293.9	312.1	363.6	406.0	425.7
70°	248.5	272.7	325.7	368.1	386.3
72.5°	212.1	233.3	287.8	330.3	350.0
75°	169.7	195.4	250.0	292.4	307.5
77.5°	134.8	160.6	212.1	245.4	253.0
80°	98.5	124.2	172.7	189.4	193.9
82.5°	66.7	90.9	124.2	128.8	130.3
85°	40.9	56.1	72.7	72.7	72.7
87.5°	19.7	22.7	25.8	24.2	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)