

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: P309008

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA08-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: P309008
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-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 3258.0 lumens
Efficiency: N/A
Efficacy: 116.8 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

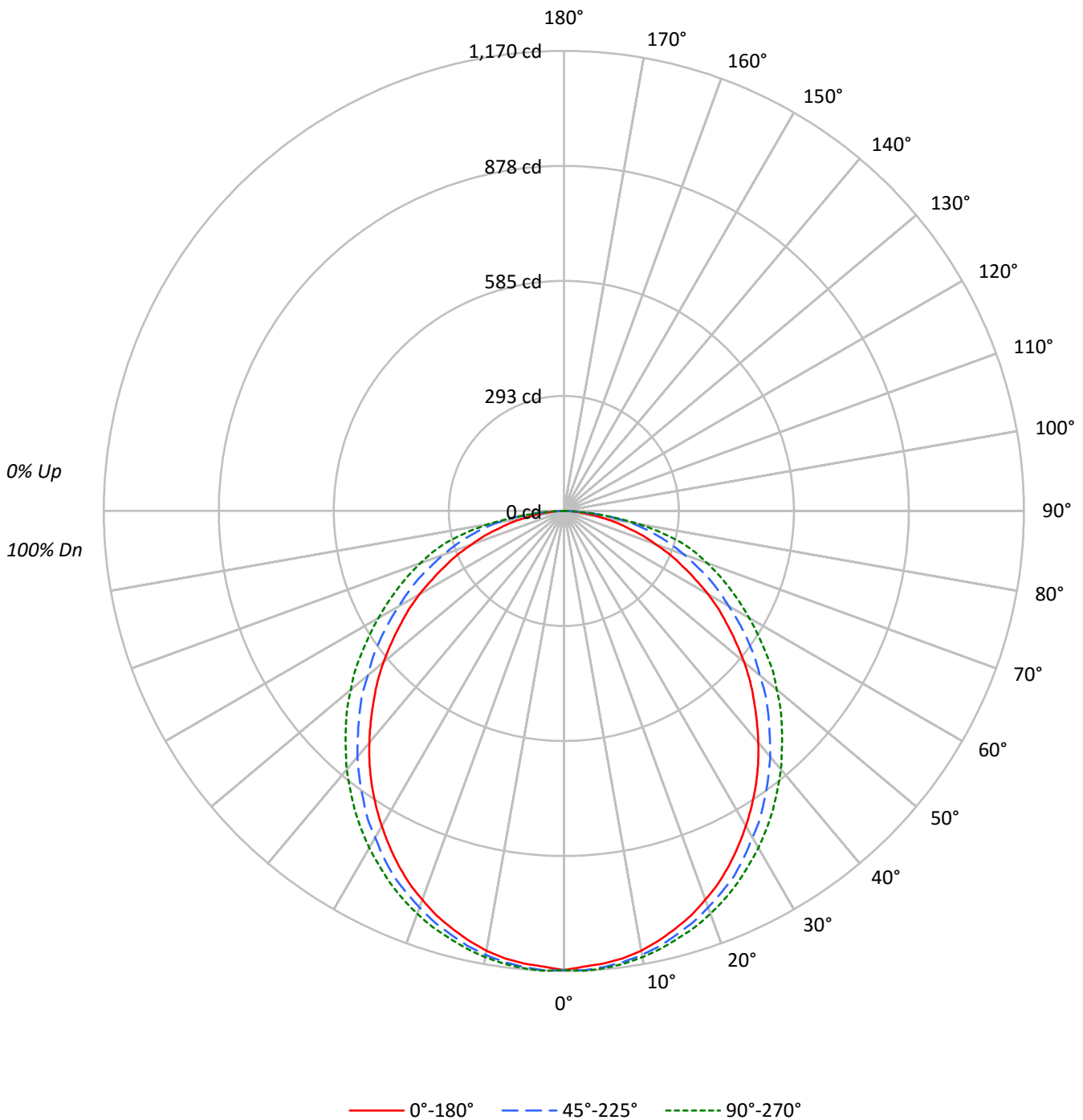
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3141	3141	3141
5°	3121	3145	3153
10°	3103	3132	3148
15°	3062	3104	3134
20°	3012	3073	3121
25°	2952	3042	3101
30°	2876	2980	3075
35°	2797	2926	3046
40°	2702	2868	3017
45°	2603	2800	2985
50°	2507	2724	2959
55°	2389	2674	2938
60°	2282	2610	2929
65°	2129	2594	2962
70°	1961	2571	3050
75°	1771	2608	3209
80°	1531	2686	3016
85°	1266	2254	2254



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.4	3.4
10°-20°	314.2	9.6
20°-30°	470.1	14.4
30°-40°	556.7	17.1
40°-50°	567.4	17.4
50°-60°	508.5	15.6
60°-70°	398.1	12.2
70°-80°	256.7	7.9
80°-90°	75.8	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°	894.7	27.5
0°-40°	1451.4	44.5
0°-60°	2527.3	77.6
0°-90°	3258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1155	1158	1164	1166	1167	110
15°	1099	1105	1114	1123	1125	310
25°	994	1003	1025	1038	1044	458
35°	851	862	891	918	927	532
45°	684	699	736	774	784	528
55°	509	526	570	610	626	457
65°	334	354	407	447	465	332
75°	170	196	251	293	309	183
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°	1167.4	1167.4	1167.4	1167.4	1167.4
2.5°	1159.8	1162.9	1169.0	1170.5	1170.5
5°	1155.3	1158.3	1164.4	1165.9	1167.4
7.5°	1147.7	1149.2	1156.8	1159.8	1161.4
10°	1135.5	1138.6	1146.2	1150.7	1152.2
12.5°	1118.8	1123.4	1132.5	1138.6	1140.1
15°	1099.0	1105.1	1114.2	1123.4	1124.9
17.5°	1077.8	1083.8	1096.0	1106.6	1109.7
20°	1051.9	1059.5	1073.2	1085.4	1089.9
22.5°	1026.1	1032.2	1048.9	1064.1	1068.6
25°	994.2	1003.3	1024.6	1038.2	1044.3
27.5°	960.7	971.3	992.6	1010.9	1017.0
30°	925.7	936.4	959.2	982.0	989.6
32.5°	889.3	901.4	928.8	951.6	959.2
35°	851.3	861.9	890.8	918.1	927.3
37.5°	811.7	820.9	854.3	883.2	892.3
40°	769.2	781.3	816.3	849.7	858.9
42.5°	726.6	740.3	775.3	811.7	820.9
45°	684.0	699.2	735.7	773.7	784.4
47.5°	643.0	655.2	696.2	732.7	747.9
50°	598.9	611.1	650.6	691.6	706.9
52.5°	553.3	570.0	612.6	652.1	670.4
55°	509.2	526.0	570.0	609.6	626.3
57.5°	468.2	481.9	527.5	568.5	585.2
60°	424.1	436.3	484.9	529.0	544.2
62.5°	377.0	395.2	445.4	486.4	504.7
65°	334.4	354.2	407.4	446.9	465.2
67.5°	294.9	313.1	364.8	407.4	427.2
70°	249.3	273.6	326.8	369.4	387.6
72.5°	212.8	234.1	288.8	331.4	351.1
75°	170.3	196.1	250.8	293.4	308.6
77.5°	135.3	161.1	212.8	246.3	253.9
80°	98.8	124.6	173.3	190.0	194.6
82.5°	66.9	91.2	124.6	129.2	130.7
85°	41.0	56.2	73.0	73.0	73.0
87.5°	19.8	22.8	25.8	24.3	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)