

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: P309018

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA125-W2A-U-4500K**

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: P309018
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-4500K
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: 3303.0 lumens
Efficiency: N/A
Efficacy: 117.5 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

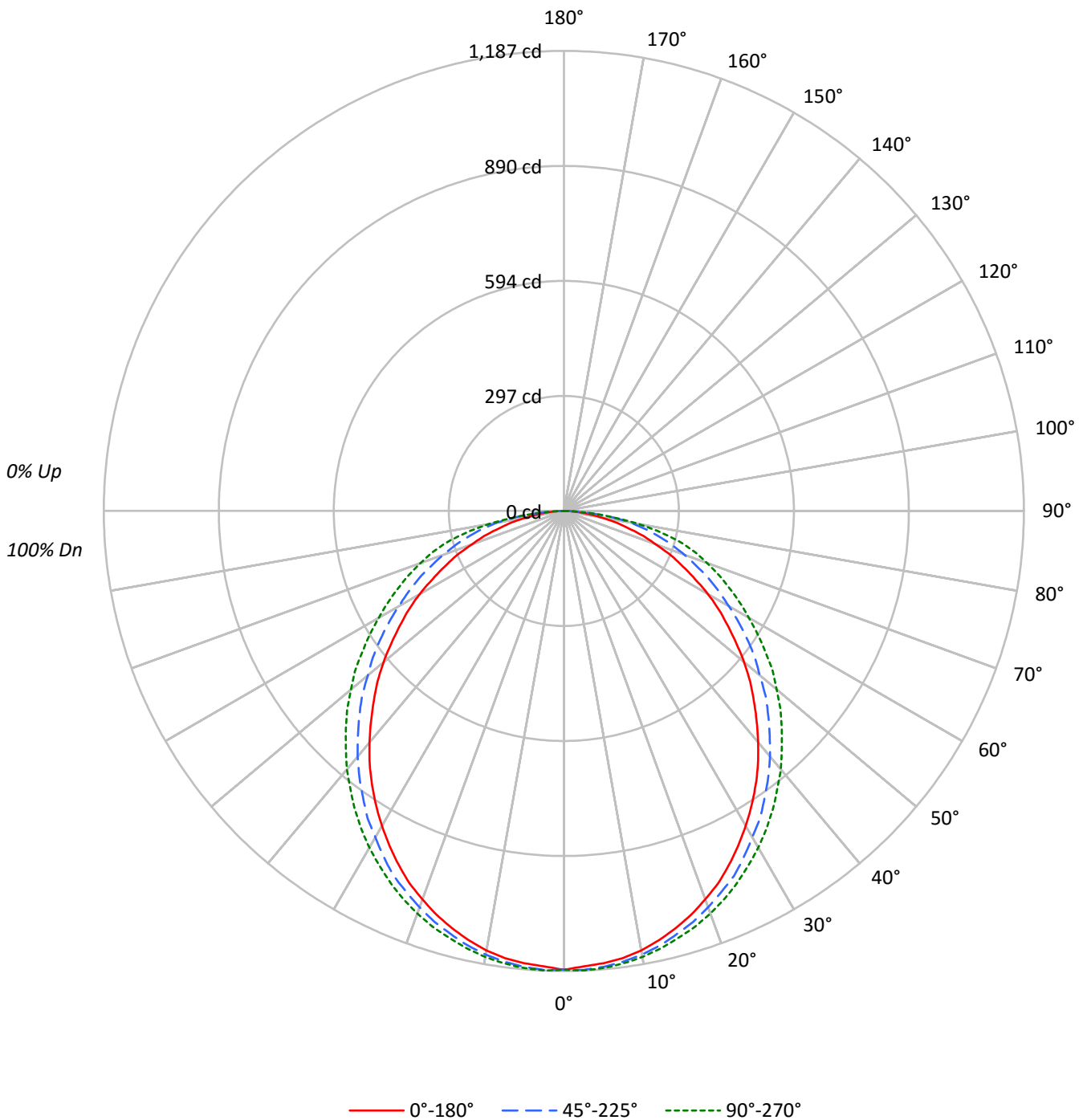
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-34HE-UNV-L82765-S-CA125-W2A-U-4500K

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°	3185	3185	3185
5°	3164	3189	3197
10°	3146	3175	3192
15°	3104	3147	3177
20°	3054	3116	3164
25°	2993	3084	3143
30°	2916	3022	3118
35°	2835	2967	3088
40°	2739	2907	3059
45°	2639	2839	3026
50°	2542	2761	3000
55°	2422	2711	2979
60°	2314	2646	2969
65°	2159	2630	3003
70°	1988	2607	3092
75°	1795	2644	3252
80°	1553	2723	3058
85°	1284	2285	2285



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	3.4
10°-20°	318.5	9.6
20°-30°	476.6	14.4
30°-40°	564.4	17.1
40°-50°	575.2	17.4
50°-60°	515.5	15.6
60°-70°	403.6	12.2
70°-80°	260.3	7.9
80°-90°	76.9	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°	907.0	27.5
0°-40°	1471.5	44.5
0°-60°	2562.2	77.6
0°-90°	3303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1171	1174	1180	1182	1184	111
15°	1114	1120	1130	1139	1140	314
25°	1008	1017	1039	1053	1059	464
35°	863	874	903	931	940	539
45°	694	709	746	784	795	536
55°	516	533	578	618	635	463
65°	339	359	413	453	472	337
75°	173	199	254	297	313	185
85°	42	57	74	74	74	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1183.6	1183.6	1183.6	<i>1183.6</i>	1183.6
2.5°	<i>1175.9</i>	<i>1178.9</i>	<i>1185.1</i>	<i>1186.7</i>	<i>1186.7</i>
5°	1171.2	1174.3	1180.5	<i>1182.0</i>	1183.6
7.5°	1163.5	1165.1	1172.8	<i>1175.9</i>	1177.4
10°	1151.2	1154.3	1162.0	<i>1166.6</i>	1168.2
12.5°	1134.3	1138.9	1148.1	<i>1154.3</i>	1155.8
15°	1114.2	1120.4	1129.6	<i>1138.9</i>	1140.4
17.5°	1092.6	1098.8	1111.1	<i>1121.9</i>	1125.0
20°	1066.4	1074.1	1088.0	<i>1100.3</i>	1105.0
22.5°	1040.2	1046.4	1063.4	<i>1078.8</i>	1083.4
25°	1007.9	1017.1	1038.7	<i>1052.6</i>	1058.7
27.5°	974.0	984.8	1006.3	<i>1024.8</i>	1031.0
30°	938.5	949.3	972.4	<i>995.6</i>	1003.3
32.5°	901.5	913.9	941.6	<i>964.7</i>	972.4
35°	863.0	873.8	903.1	<i>930.8</i>	940.1
37.5°	822.9	832.2	866.1	<i>895.4</i>	904.6
40°	779.8	792.1	827.6	<i>861.5</i>	870.7
42.5°	736.6	750.5	786.0	<i>822.9</i>	832.2
45°	693.5	708.9	745.9	<i>784.4</i>	795.2
47.5°	651.9	664.2	705.8	<i>742.8</i>	758.2
50°	607.2	619.5	659.6	<i>701.2</i>	716.6
52.5°	561.0	577.9	621.1	<i>661.1</i>	679.6
55°	516.3	533.2	577.9	<i>618.0</i>	634.9
57.5°	474.7	488.5	534.8	<i>576.4</i>	593.3
60°	430.0	442.3	491.6	<i>536.3</i>	551.7
62.5°	382.2	400.7	451.5	<i>493.2</i>	511.6
65°	339.0	359.1	413.0	<i>453.1</i>	471.6
67.5°	299.0	317.5	369.9	<i>413.0</i>	433.1
70°	252.7	277.4	331.3	<i>374.5</i>	393.0
72.5°	215.8	237.3	292.8	<i>336.0</i>	356.0
75°	172.6	198.8	254.3	<i>297.4</i>	312.8
77.5°	137.2	163.4	215.8	<i>249.7</i>	257.4
80°	100.2	126.4	175.7	<i>192.6</i>	197.3
82.5°	67.8	92.5	126.4	<i>131.0</i>	132.5
85°	41.6	57.0	74.0	<i>74.0</i>	74.0
87.5°	20.0	23.1	26.2	<i>24.7</i>	24.7
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)