

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: P312977

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CP125-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: P312977
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-L83050-S-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3349.0 lumens
Efficiency: N/A
Efficacy: 118.8 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

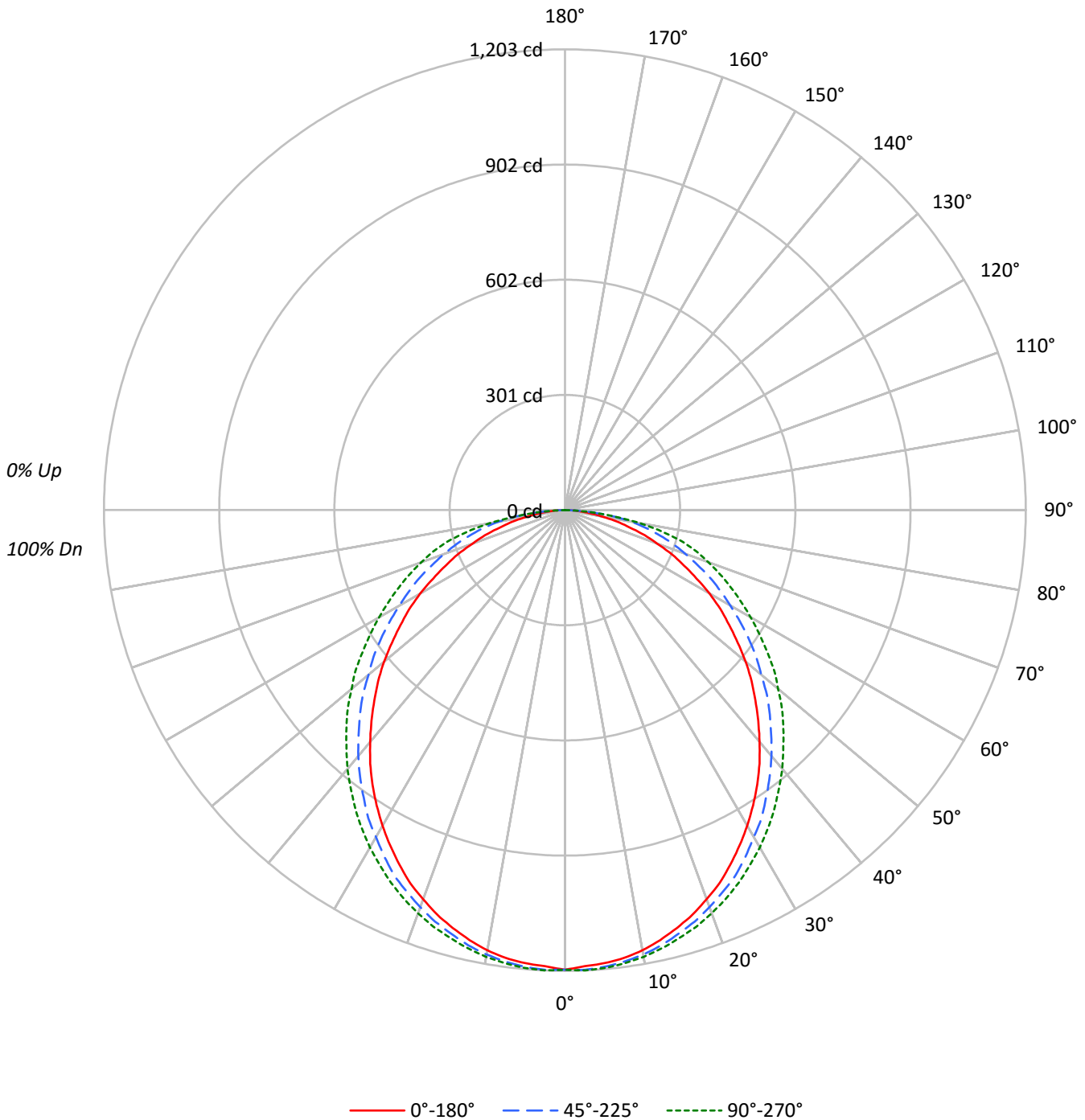
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3229	3229	3229
5°	3208	3233	3242
10°	3189	3219	3236
15°	3147	3191	3221
20°	3096	3159	3208
25°	3034	3127	3187
30°	2957	3064	3161
35°	2874	3008	3131
40°	2778	2948	3101
45°	2676	2878	3068
50°	2578	2800	3042
55°	2456	2749	3020
60°	2347	2683	3011
65°	2189	2667	3044
70°	2017	2644	3135
75°	1820	2680	3298
80°	1574	2760	3099
85°	1303	2316	2316



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.5	3.4
10°-20°	323.0	9.6
20°-30°	483.2	14.4
30°-40°	572.3	17.1
40°-50°	583.2	17.4
50°-60°	522.7	15.6
60°-70°	409.3	12.2
70°-80°	263.9	7.9
80°-90°	78.0	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°	919.7	27.5
0°-40°	1492.0	44.5
0°-60°	2597.9	77.6
0°-90°	3349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3349.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1200	1200	1200	1200	1200	
5°	1188	1191	1197	1198	1200	113
15°	1130	1136	1145	1155	1156	319
25°	1022	1031	1053	1067	1074	470
35°	875	886	916	944	953	547
45°	703	719	756	795	806	543
55°	524	541	586	627	644	469
65°	344	364	419	459	478	341
75°	175	202	258	302	317	188
85°	42	58	75	75	75	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1200.1	1200.1	1200.1	1200.1	1200.1
2.5°	1192.2	1195.4	1201.6	1203.2	1203.2
5°	1187.6	1190.7	1196.9	1198.5	1200.1
7.5°	1179.7	1181.3	1189.1	1192.2	1193.8
10°	1167.2	1170.4	1178.2	1182.9	1184.4
12.5°	1150.0	1154.7	1164.1	1170.4	1171.9
15°	1129.7	1136.0	1145.4	1154.7	1156.3
17.5°	1107.9	1114.1	1126.6	1137.5	1140.7
20°	1081.3	1089.1	1103.2	1115.7	1120.4
22.5°	1054.7	1061.0	1078.2	1093.8	1098.5
25°	1021.9	1031.3	1053.2	1067.2	1073.5
27.5°	987.5	998.5	1020.4	1039.1	1045.4
30°	951.6	962.5	986.0	1009.4	1017.2
32.5°	914.1	926.6	954.7	978.2	986.0
35°	875.0	886.0	915.7	943.8	953.2
37.5°	834.4	843.8	878.2	907.9	917.2
40°	790.7	803.2	839.1	873.5	882.9
42.5°	746.9	761.0	796.9	834.4	843.8
45°	703.2	718.8	756.3	795.3	806.3
47.5°	661.0	673.5	715.7	753.2	768.8
50°	615.7	628.2	668.8	711.0	726.6
52.5°	568.8	586.0	629.7	670.3	689.1
55°	523.5	540.6	586.0	626.6	643.8
57.5°	481.3	495.3	542.2	584.4	601.6
60°	436.0	448.5	498.5	543.8	559.4
62.5°	387.5	406.3	457.8	500.0	518.8
65°	343.8	364.1	418.8	459.4	478.1
67.5°	303.1	321.9	375.0	418.8	439.1
70°	256.3	281.3	336.0	379.7	398.5
72.5°	218.8	240.6	296.9	340.6	361.0
75°	175.0	201.6	257.8	301.6	317.2
77.5°	139.1	165.6	218.8	253.1	260.9
80°	101.6	128.1	178.1	195.3	200.0
82.5°	68.8	93.8	128.1	132.8	134.4
85°	42.2	57.8	75.0	75.0	75.0
87.5°	20.3	23.4	26.6	25.0	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)