

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: P309029

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP125-W2A-U-5500K**

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: P309029
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-CP125-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 3316.0 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

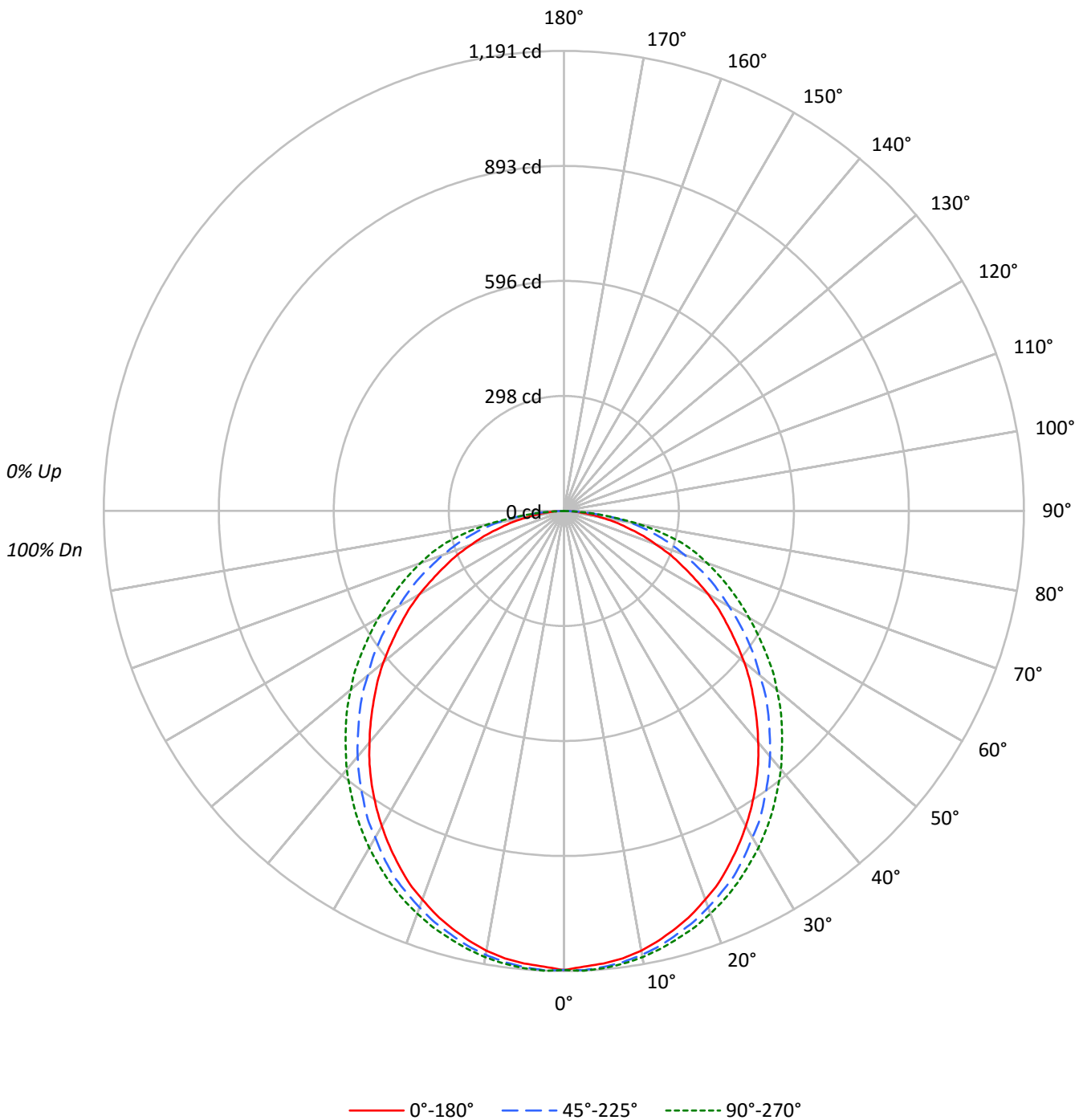
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3197	3197	3197
5°	3176	3201	3210
10°	3158	3188	3205
15°	3116	3159	3190
20°	3066	3128	3177
25°	3004	3096	3156
30°	2928	3034	3130
35°	2846	2978	3100
40°	2750	2918	3071
45°	2649	2850	3038
50°	2552	2772	3012
55°	2432	2722	2990
60°	2323	2656	2981
65°	2167	2640	3014
70°	1996	2617	3104
75°	1802	2654	3266
80°	1559	2734	3068
85°	1291	2294	2294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	3.4
10°-20°	319.8	9.6
20°-30°	478.5	14.4
30°-40°	566.6	17.1
40°-50°	577.5	17.4
50°-60°	517.6	15.6
60°-70°	405.2	12.2
70°-80°	261.3	7.9
80°-90°	77.2	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°	910.6	27.5
0°-40°	1477.3	44.5
0°-60°	2572.3	77.6
0°-90°	3316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1176	1179	1185	1187	1188	112
15°	1119	1125	1134	1143	1145	315
25°	1012	1021	1043	1057	1063	466
35°	866	877	907	934	944	541
45°	696	712	749	788	798	538
55°	518	535	580	620	637	465
65°	340	360	415	455	473	338
75°	173	200	255	299	314	186
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°	1188.2	1188.2	1188.2	<i>1188.2</i>	1188.2
2.5°	<i>1180.5</i>	<i>1183.6</i>	<i>1189.8</i>	<i>1191.3</i>	<i>1191.3</i>
5°	1175.8	1178.9	1185.1	<i>1186.7</i>	1188.2
7.5°	1168.1	1169.7	1177.4	<i>1180.5</i>	1182.0
10°	1155.7	1158.8	1166.6	<i>1171.2</i>	1172.8
12.5°	1138.7	1143.4	1152.6	<i>1158.8</i>	1160.4
15°	1118.6	1124.8	1134.1	<i>1143.4</i>	1144.9
17.5°	1096.9	1103.1	1115.5	<i>1126.3</i>	1129.4
20°	1070.6	1078.4	1092.3	<i>1104.7</i>	1109.3
22.5°	1044.3	1050.5	1067.5	<i>1083.0</i>	1087.7
25°	1011.8	1021.1	1042.8	<i>1056.7</i>	1062.9
27.5°	977.8	988.6	1010.3	<i>1028.9</i>	1035.1
30°	942.2	953.1	976.3	<i>999.5</i>	1007.2
32.5°	905.1	917.5	945.3	<i>968.5</i>	976.3
35°	866.4	877.2	906.6	<i>934.5</i>	943.8
37.5°	826.2	835.5	869.5	<i>898.9</i>	908.2
40°	782.9	795.2	830.8	<i>864.9</i>	874.2
42.5°	739.5	753.5	789.1	<i>826.2</i>	835.5
45°	696.2	711.7	748.8	<i>787.5</i>	798.3
47.5°	654.5	666.8	708.6	<i>745.7</i>	761.2
50°	609.6	622.0	662.2	<i>704.0</i>	719.4
52.5°	563.2	580.2	623.5	<i>663.7</i>	682.3
55°	518.3	535.3	580.2	<i>620.4</i>	637.4
57.5°	476.5	490.5	536.9	<i>578.6</i>	595.7
60°	431.7	444.0	493.5	<i>538.4</i>	553.9
62.5°	383.7	402.3	453.3	<i>495.1</i>	513.7
65°	340.4	360.5	414.6	<i>454.9</i>	473.4
67.5°	300.2	318.7	371.3	<i>414.6</i>	434.8
70°	253.7	278.5	332.6	<i>376.0</i>	394.5
72.5°	216.6	238.3	294.0	<i>337.3</i>	357.4
75°	173.3	199.6	255.3	<i>298.6</i>	314.1
77.5°	137.7	164.0	216.6	<i>250.6</i>	258.4
80°	100.6	126.9	176.4	<i>193.4</i>	198.0
82.5°	68.1	92.8	126.9	<i>131.5</i>	133.1
85°	41.8	57.2	74.3	<i>74.3</i>	74.3
87.5°	20.1	23.2	26.3	<i>24.8</i>	24.8
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)