

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: P312976

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CP125-W2A-U-3500K**

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: P312976
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-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3500K 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: 3189.0 lumens
Efficiency: N/A
Efficacy: 115.5 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

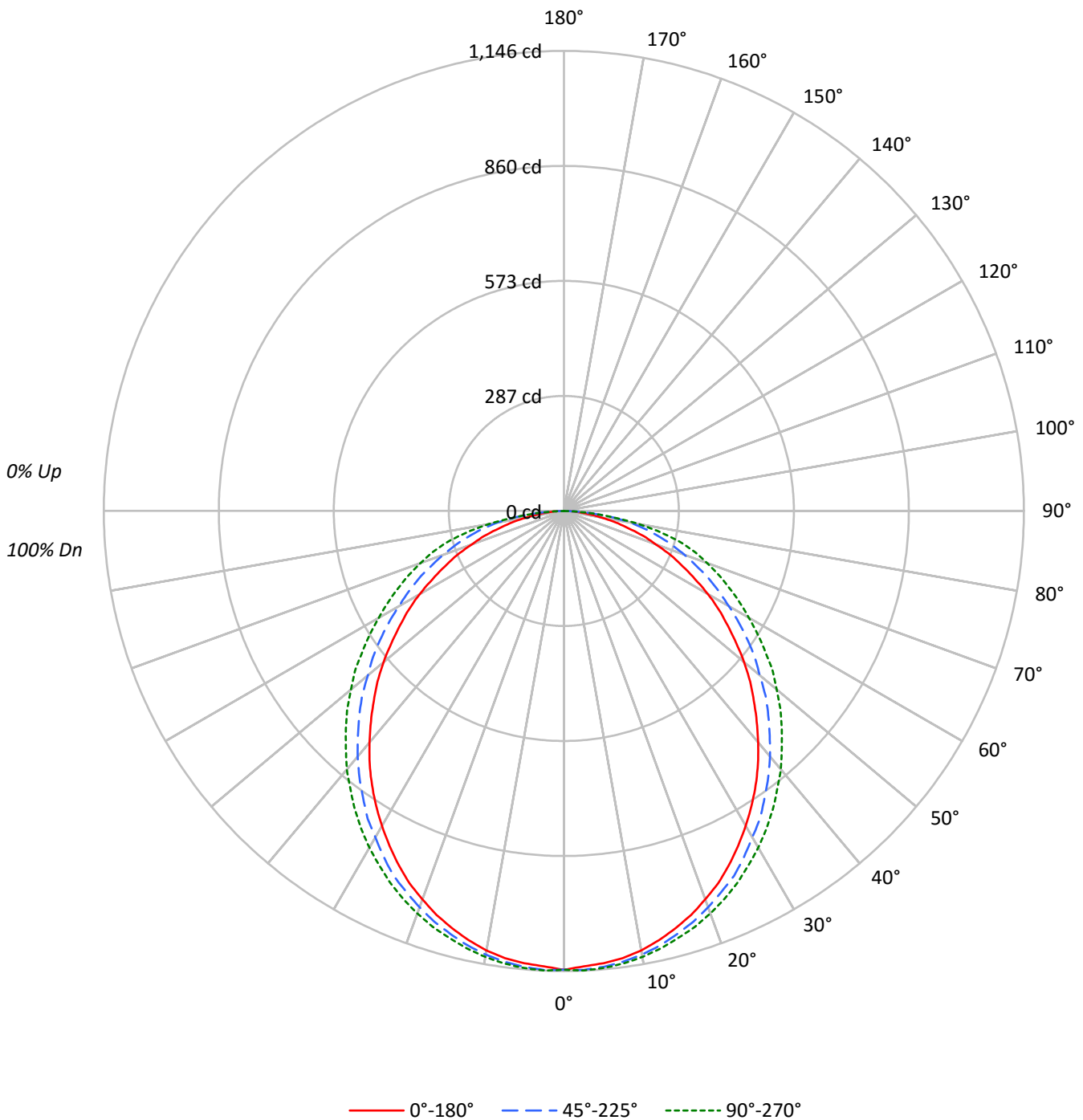
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3075	3075	3075
5°	3055	3079	3087
10°	3037	3066	3082
15°	2997	3038	3068
20°	2948	3008	3055
25°	2889	2978	3035
30°	2816	2917	3010
35°	2737	2864	2982
40°	2645	2807	2953
45°	2548	2741	2922
50°	2454	2666	2897
55°	2339	2618	2876
60°	2234	2554	2867
65°	2084	2539	2899
70°	1920	2517	2985
75°	1732	2552	3140
80°	1499	2628	2952
85°	1241	2205	2205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	3.4
10°-20°	307.5	9.6
20°-30°	460.2	14.4
30°-40°	544.9	17.1
40°-50°	555.4	17.4
50°-60°	497.8	15.6
60°-70°	389.7	12.2
70°-80°	251.3	7.9
80°-90°	74.2	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°	875.7	27.5
0°-40°	1420.7	44.5
0°-60°	2473.8	77.6
0°-90°	3189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1131	1134	1140	1141	1143	107
15°	1076	1082	1091	1100	1101	303
25°	973	982	1003	1016	1022	448
35°	833	844	872	899	908	521
45°	670	684	720	757	768	517
55°	498	515	558	597	613	447
65°	327	347	399	437	455	325
75°	167	192	246	287	302	179
85°	40	55	71	71	71	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1142.7	1142.7	1142.7	1142.7	1142.7
2.5°	1135.3	1138.3	1144.2	1145.7	1145.7
5°	1130.8	1133.8	1139.7	1141.2	1142.7
7.5°	1123.4	1124.9	1132.3	1135.3	1136.8
10°	1111.5	1114.4	1121.9	1126.4	1127.8
12.5°	1095.1	1099.6	1108.5	1114.4	1115.9
15°	1075.8	1081.7	1090.6	1099.6	1101.1
17.5°	1054.9	1060.9	1072.8	1083.2	1086.2
20°	1029.6	1037.1	1050.5	1062.4	1066.8
22.5°	1004.3	1010.3	1026.7	1041.5	1046.0
25°	973.1	982.0	1002.9	1016.2	1022.2
27.5°	940.4	950.8	971.6	989.5	995.4
30°	906.1	916.6	938.9	961.2	968.6
32.5°	870.4	882.3	909.1	931.4	938.9
35°	833.2	843.6	871.9	898.7	907.6
37.5°	794.5	803.5	836.2	864.5	873.4
40°	752.9	764.8	799.0	831.7	840.7
42.5°	711.2	724.6	758.8	794.5	803.5
45°	669.6	684.4	720.2	757.3	767.8
47.5°	629.4	641.3	681.5	717.2	732.1
50°	586.2	598.1	636.8	677.0	691.9
52.5°	541.6	558.0	599.6	638.3	656.2
55°	498.5	514.8	558.0	596.7	613.0
57.5°	458.3	471.7	516.3	556.5	572.8
60°	415.1	427.0	474.6	517.8	532.7
62.5°	369.0	386.9	436.0	476.1	494.0
65°	327.3	346.7	398.8	437.4	455.3
67.5°	288.7	306.5	357.1	398.8	418.1
70°	244.0	267.8	319.9	361.6	379.4
72.5°	208.3	229.1	282.7	324.4	343.7
75°	166.6	191.9	245.5	287.2	302.0
77.5°	132.4	157.7	208.3	241.0	248.5
80°	96.7	122.0	169.6	186.0	190.5
82.5°	65.5	89.3	122.0	126.5	128.0
85°	40.2	55.1	71.4	71.4	71.4
87.5°	19.3	22.3	25.3	23.8	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)