

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: P312828

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CP125-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: P312828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3205.0 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

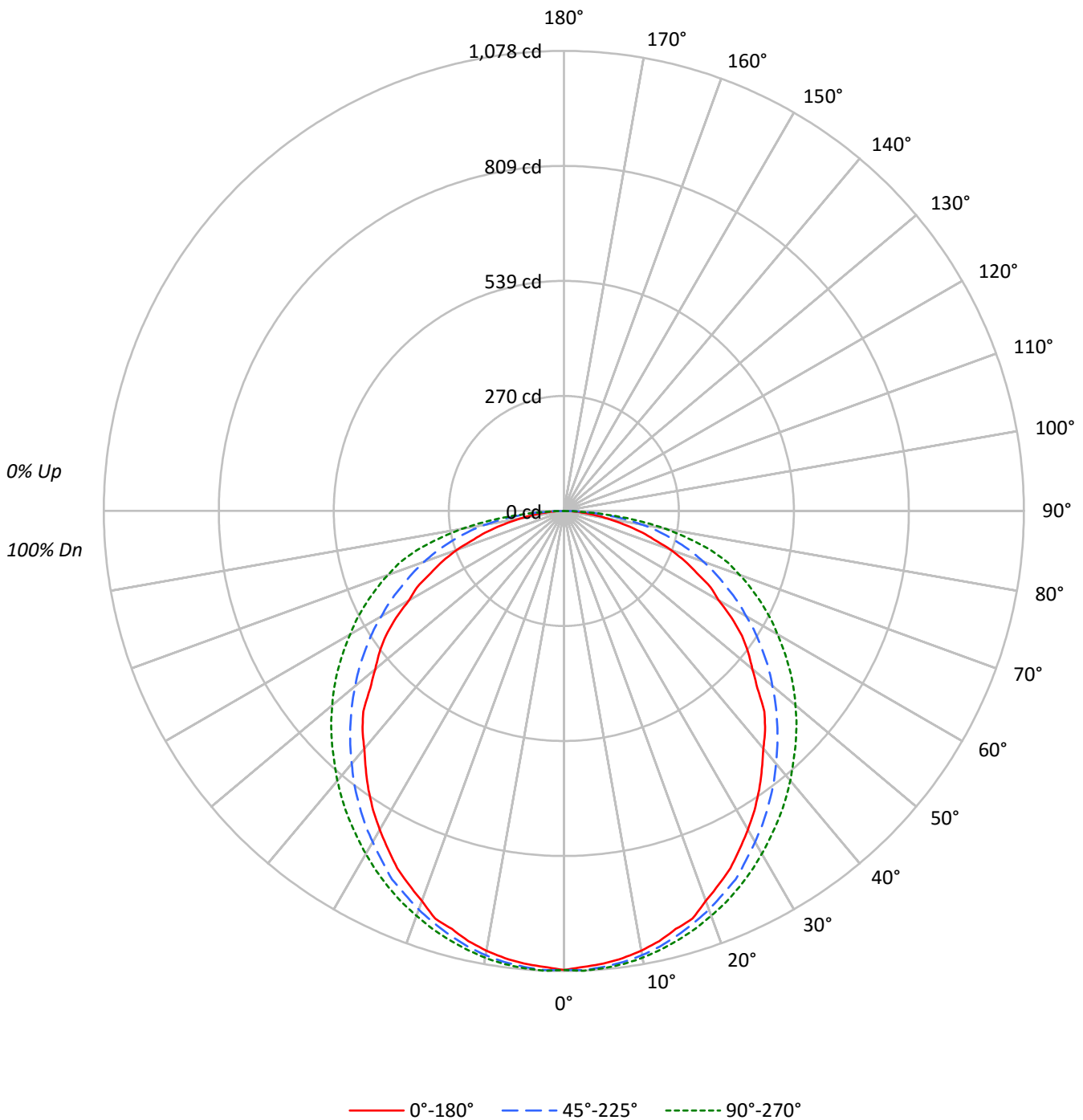
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2894	2894	2894
5°	2876	2896	2905
10°	2859	2888	2905
15°	2825	2868	2897
20°	2785	2846	2890
25°	2742	2828	2888
30°	2679	2783	2884
35°	2621	2751	2888
40°	2554	2716	2899
45°	2528	2691	2925
50°	2415	2671	2967
55°	2389	2663	3030
60°	2254	2658	3112
65°	2188	2676	3252
70°	2100	2740	3452
75°	1914	2823	3716
80°	1640	2924	3756
85°	1328	2794	3220



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.7	3.2
10°-20°	290.3	9.1
20°-30°	436.9	13.6
30°-40°	524.3	16.4
40°-50°	548.0	17.1
50°-60°	510.7	15.9
60°-70°	418.9	13.1
70°-80°	282.3	8.8
80°-90°	91.9	2.9
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°	828.9	25.9
0°-40°	1353.2	42.2
0°-60°	2411.9	75.3
0°-90°	3205.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3205.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1075	1075	1075	1075	1075	
5°	1065	1068	1072	1074	1075	101
15°	1014	1020	1029	1038	1040	287
25°	923	930	953	966	972	425
35°	798	808	838	867	879	499
45°	664	669	707	750	768	507
55°	509	518	568	621	646	451
65°	344	359	420	482	511	342
75°	184	204	272	333	357	194
85°	43	61	90	106	104	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1069.2	1072.2	1076.8	1078.4	1078.4
5°	1064.6	1067.6	1072.2	1073.8	1075.3
7.5°	1056.9	1060.0	1066.1	1069.2	1070.7
10°	1046.2	1049.2	1056.9	1061.5	1063.0
12.5°	1032.4	1035.4	1044.6	1050.8	1052.3
15°	1013.9	1020.1	1029.3	1038.5	1040.0
17.5°	1001.7	1000.1	1012.4	1023.2	1026.2
20°	972.5	980.2	994.0	1006.3	1009.3
22.5°	948.0	954.1	972.5	986.3	992.5
25°	923.4	929.6	952.6	966.4	972.5
27.5°	892.8	902.0	923.4	943.4	951.1
30°	862.1	871.3	895.8	918.8	928.0
32.5°	831.4	842.1	868.2	892.8	903.5
35°	797.7	808.4	837.5	866.7	879.0
37.5°	762.4	776.2	806.9	839.1	852.9
40°	727.1	740.9	773.1	809.9	825.3
42.5°	698.0	704.1	740.9	780.8	796.1
45°	664.2	668.8	707.2	750.1	768.5
47.5°	615.1	632.0	673.4	721.0	739.4
50°	576.8	595.2	638.1	688.7	708.7
52.5°	544.6	556.8	604.4	655.0	678.0
55°	509.3	518.5	567.6	621.3	645.8
57.5°	466.3	483.2	532.3	587.5	612.0
60°	418.8	440.2	493.9	553.8	578.3
62.5°	388.1	400.4	458.7	518.5	546.1
65°	343.6	358.9	420.3	481.7	510.8
67.5°	306.8	322.1	385.0	446.4	475.5
70°	266.9	282.2	348.2	409.6	438.7
72.5°	220.9	242.4	311.4	372.8	403.4
75°	184.1	204.0	271.5	332.9	357.4
77.5°	142.7	168.7	231.6	282.2	300.7
80°	105.8	131.9	188.7	225.5	242.4
82.5°	72.1	98.2	141.1	168.7	177.9
85°	43.0	61.4	90.5	105.8	104.3
87.5°	19.9	26.1	36.8	36.8	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)