

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: P312851

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-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: P312851
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: 22FCZ2-39HE-UNV-L83050-CP125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3466.0 lumens
Efficiency: N/A
Efficacy: 107.0 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

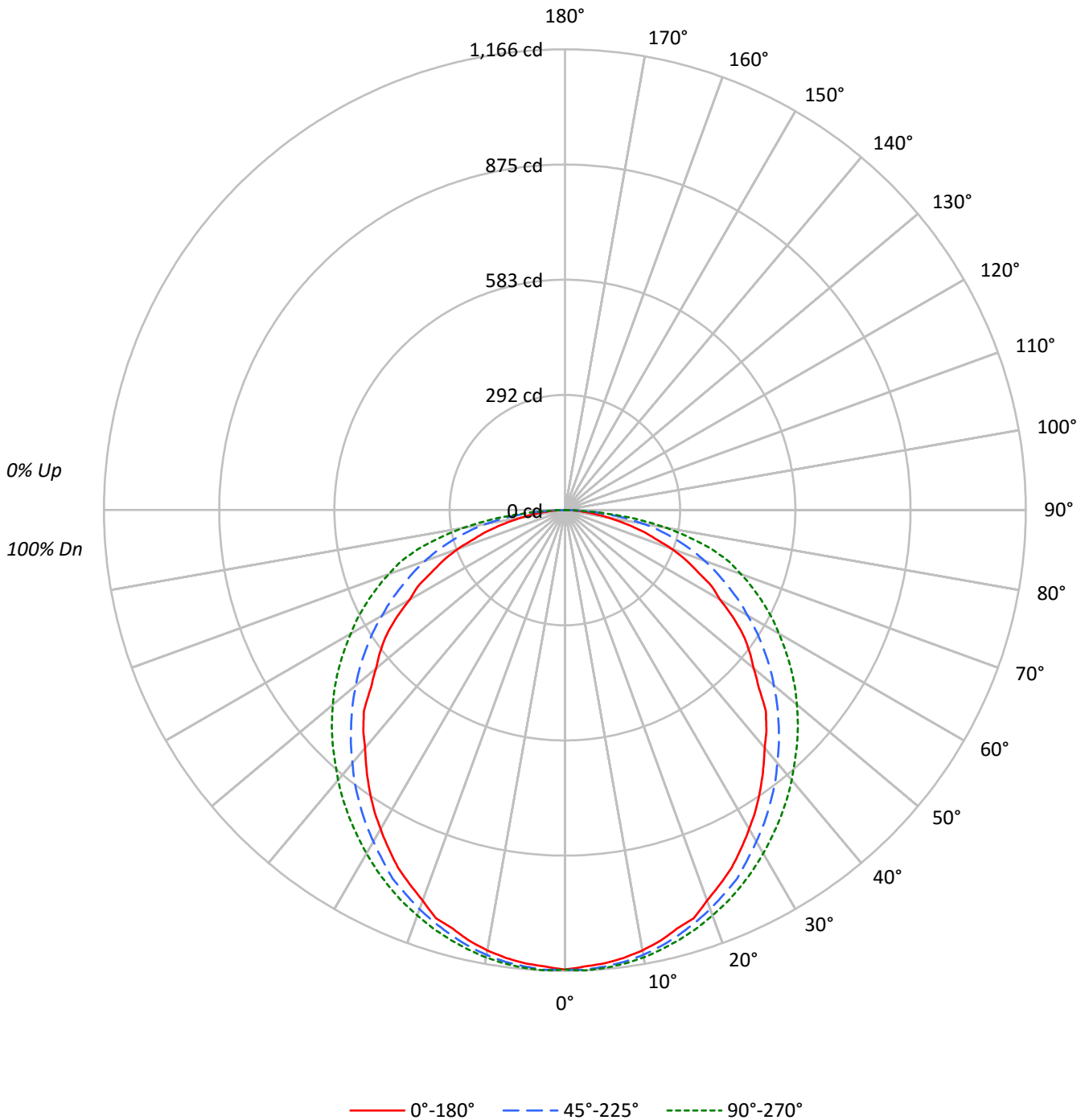
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3129	3129	3129
5°	3110	3132	3141
10°	3092	3123	3141
15°	3055	3101	3133
20°	3012	3078	3126
25°	2965	3059	3123
30°	2897	3010	3118
35°	2834	2975	3122
40°	2762	2937	3135
45°	2734	2910	3163
50°	2611	2889	3208
55°	2584	2880	3277
60°	2437	2875	3366
65°	2366	2894	3517
70°	2271	2963	3733
75°	2070	3053	4018
80°	1774	3161	4062
85°	1433	3023	3483



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.2
10°-20°	313.9	9.1
20°-30°	472.4	13.6
30°-40°	567.0	16.4
40°-50°	592.6	17.1
50°-60°	552.3	15.9
60°-70°	453.0	13.1
70°-80°	305.2	8.8
80°-90°	99.4	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°	896.4	25.9
0°-40°	1463.4	42.2
0°-60°	2608.3	75.3
0°-90°	3466.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3466.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1163	1163	1163	1163	1163	
5°	1151	1155	1160	1161	1163	109
15°	1096	1103	1113	1123	1125	310
25°	999	1005	1030	1045	1052	459
35°	863	874	906	937	950	539
45°	718	723	765	811	831	549
55°	551	561	614	672	698	488
65°	372	388	454	521	552	370
75°	199	221	294	360	386	209
85°	46	66	98	114	113	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1162.9	1162.9	1162.9	<i>1162.9</i>	1162.9
2.5°	<i>1156.2</i>	<i>1159.6</i>	<i>1164.5</i>	<i>1166.2</i>	<i>1166.2</i>
5°	1151.3	1154.6	1159.6	<i>1161.2</i>	1162.9
7.5°	1143.0	1146.3	1152.9	<i>1156.2</i>	1157.9
10°	1131.4	1134.7	1143.0	<i>1147.9</i>	1149.6
12.5°	1116.4	1119.7	1129.7	<i>1136.3</i>	1138.0
15°	1096.5	1103.2	1113.1	<i>1123.1</i>	1124.7
17.5°	1083.2	1081.6	1094.9	<i>1106.5</i>	1109.8
20°	1051.7	1060.0	1075.0	<i>1088.2</i>	1091.5
22.5°	1025.2	1031.8	1051.7	<i>1066.7</i>	1073.3
25°	998.6	1005.3	1030.2	<i>1045.1</i>	1051.7
27.5°	965.5	975.4	998.6	<i>1020.2</i>	1028.5
30°	932.3	942.2	968.8	<i>993.7</i>	1003.6
32.5°	899.1	910.7	938.9	<i>965.5</i>	977.1
35°	862.6	874.2	905.7	<i>937.3</i>	950.5
37.5°	824.5	839.4	872.6	<i>907.4</i>	922.3
40°	786.3	801.2	836.1	<i>875.9</i>	892.5
42.5°	754.8	761.4	801.2	<i>844.4</i>	861.0
45°	718.3	723.3	764.7	<i>811.2</i>	831.1
47.5°	665.2	683.5	728.2	<i>779.7</i>	799.6
50°	623.7	643.6	690.1	<i>744.8</i>	766.4
52.5°	588.9	602.2	653.6	<i>708.3</i>	733.2
55°	550.7	560.7	613.8	<i>671.8</i>	698.4
57.5°	504.3	522.5	575.6	<i>635.3</i>	661.9
60°	452.9	476.1	534.2	<i>598.9</i>	625.4
62.5°	419.7	433.0	496.0	<i>560.7</i>	590.6
65°	371.6	388.2	454.5	<i>520.9</i>	552.4
67.5°	331.8	348.4	416.4	<i>482.7</i>	514.3
70°	288.6	305.2	376.6	<i>442.9</i>	474.4
72.5°	238.9	262.1	336.8	<i>403.1</i>	436.3
75°	199.1	220.6	293.6	<i>360.0</i>	386.5
77.5°	154.3	182.5	250.5	<i>305.2</i>	325.1
80°	114.5	142.7	204.0	<i>243.9</i>	262.1
82.5°	78.0	106.2	152.6	<i>182.5</i>	192.4
85°	46.4	66.4	97.9	<i>114.5</i>	112.8
87.5°	21.6	28.2	39.8	<i>39.8</i>	38.2
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)