

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: P312973

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CA125-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: P312973
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-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 3448.0 lumens
Efficiency: N/A
Efficacy: 118.9 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

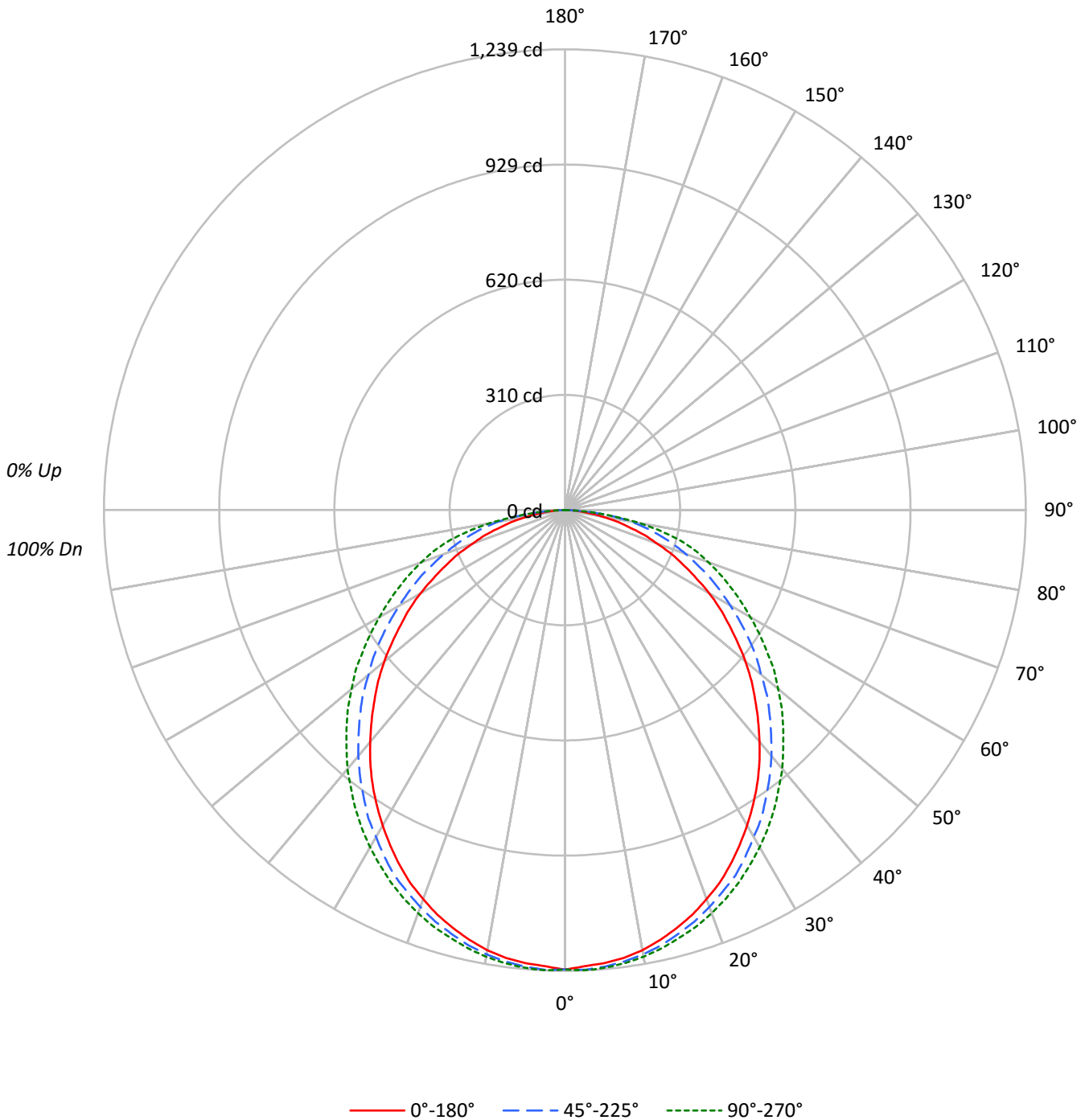
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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									100																			
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83									83																			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69									69																			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58									58																			
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49									49																			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43									43																			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37									37																			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33									33																			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30									30																			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27									27																			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24									24																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3325	3325	3325
5°	3303	3329	3337
10°	3284	3315	3332
15°	3240	3285	3317
20°	3188	3253	3303
25°	3124	3219	3282
30°	3044	3154	3254
35°	2960	3097	3224
40°	2859	3035	3193
45°	2755	2963	3159
50°	2654	2882	3132
55°	2528	2830	3110
60°	2415	2762	3099
65°	2253	2745	3135
70°	2076	2722	3227
75°	1874	2759	3396
80°	1621	2842	3191
85°	1340	2384	2384



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.8	3.4
10°-20°	332.5	9.6
20°-30°	497.5	14.4
30°-40°	589.2	17.1
40°-50°	600.5	17.4
50°-60°	538.2	15.6
60°-70°	421.3	12.2
70°-80°	271.7	7.9
80°-90°	80.2	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°	946.9	27.5
0°-40°	1536.1	44.5
0°-60°	2674.7	77.6
0°-90°	3448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1236	1236	1236	1236	1236	
5°	1223	1226	1232	1234	1236	116
15°	1163	1170	1179	1189	1190	328
25°	1052	1062	1084	1099	1105	484
35°	901	912	943	972	981	563
45°	724	740	779	819	830	559
55°	539	557	603	645	663	483
65°	354	375	431	473	492	352
75°	180	208	265	310	327	193
85°	43	60	77	77	77	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1235.5	1235.5	1235.5	1235.5	1235.5
2.5°	1227.5	1230.7	1237.1	1238.7	1238.7
5°	1222.7	1225.9	1232.3	1233.9	1235.5
7.5°	1214.6	1216.2	1224.3	1227.5	1229.1
10°	1201.7	1205.0	1213.0	1217.8	1219.4
12.5°	1184.0	1188.9	1198.5	1205.0	1206.6
15°	1163.1	1169.6	1179.2	1188.9	1190.5
17.5°	1140.6	1147.0	1159.9	1171.2	1174.4
20°	1113.3	1121.3	1135.8	1148.7	1153.5
22.5°	1085.9	1092.3	1110.0	1126.1	1131.0
25°	1052.1	1061.8	1084.3	1098.8	1105.2
27.5°	1016.7	1028.0	1050.5	1069.8	1076.3
30°	979.7	991.0	1015.1	1039.3	1047.3
32.5°	941.1	954.0	983.0	1007.1	1015.1
35°	900.9	912.2	942.7	971.7	981.3
37.5°	859.1	868.7	904.1	934.7	944.3
40°	814.0	826.9	863.9	899.3	908.9
42.5°	769.0	783.5	820.5	859.1	868.7
45°	723.9	740.0	778.6	818.9	830.1
47.5°	680.5	693.4	736.8	775.4	791.5
50°	633.9	646.7	688.5	732.0	748.1
52.5°	585.6	603.3	648.3	690.2	709.5
55°	538.9	556.6	603.3	645.1	662.8
57.5°	495.5	510.0	558.2	601.7	619.4
60°	448.8	461.7	513.2	559.8	575.9
62.5°	399.0	418.3	471.4	514.8	534.1
65°	353.9	374.8	431.1	473.0	492.3
67.5°	312.1	331.4	386.1	431.1	452.1
70°	263.8	289.6	345.9	390.9	410.2
72.5°	225.2	247.7	305.7	350.7	371.6
75°	180.2	207.5	265.4	310.5	326.6
77.5°	143.2	170.5	225.2	260.6	268.7
80°	104.6	131.9	183.4	201.1	205.9
82.5°	70.8	96.5	131.9	136.7	138.4
85°	43.4	59.5	77.2	77.2	77.2
87.5°	20.9	24.1	27.3	25.7	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)