

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: P312972

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CA125-W2A-U-4000K**

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: P312972
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-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3415.0 lumens
Efficiency: N/A
Efficacy: 121.1 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

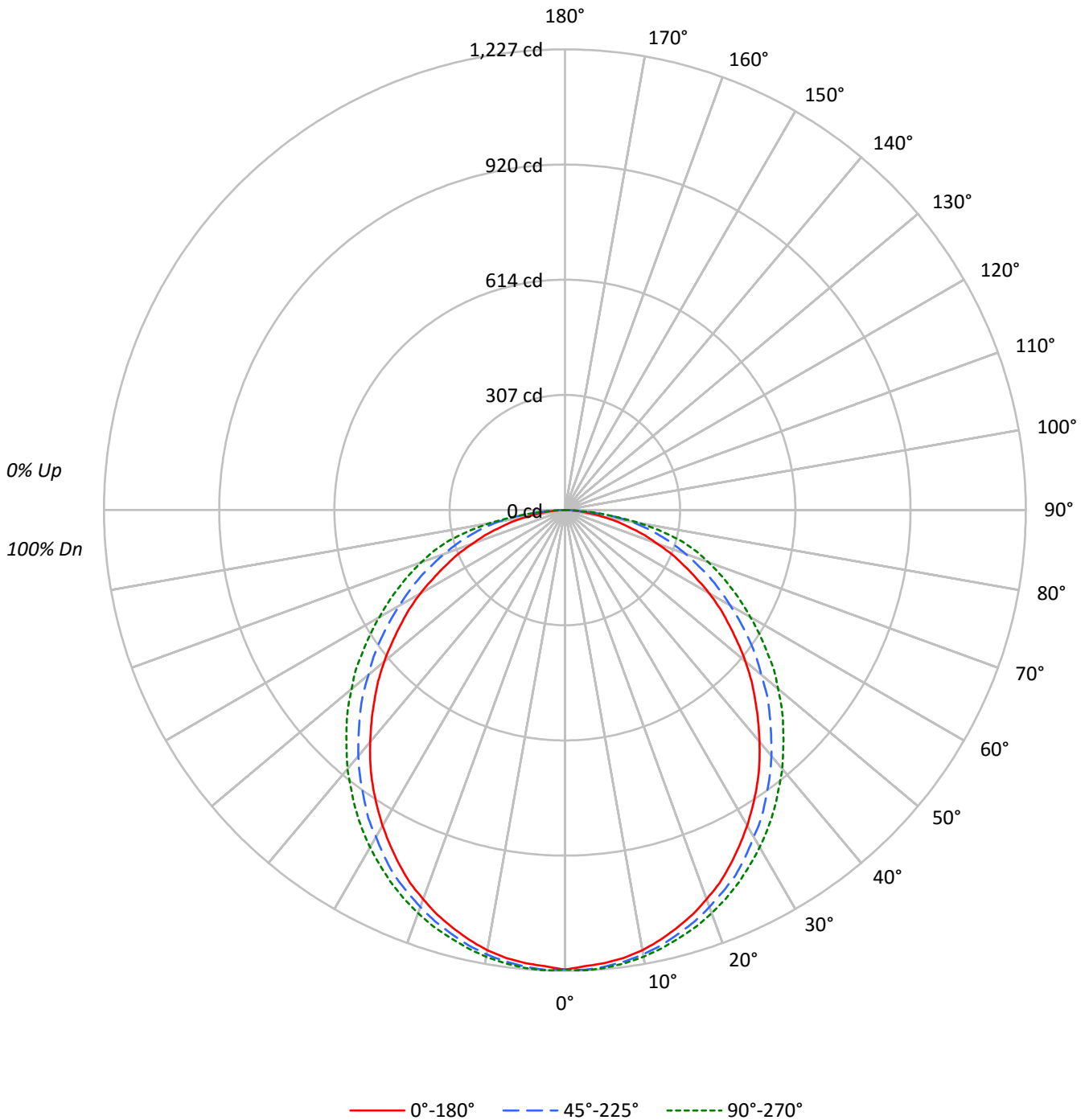
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3293	3293	3293
5°	3271	3297	3306
10°	3252	3283	3300
15°	3209	3254	3285
20°	3157	3221	3271
25°	3094	3189	3250
30°	3015	3124	3223
35°	2931	3067	3193
40°	2832	3006	3162
45°	2729	2935	3129
50°	2628	2855	3102
55°	2504	2803	3080
60°	2392	2736	3070
65°	2232	2719	3105
70°	2056	2696	3197
75°	1856	2733	3363
80°	1605	2814	3161
85°	1328	2362	2362



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.7	3.4
10°-20°	329.3	9.6
20°-30°	492.8	14.4
30°-40°	583.5	17.1
40°-50°	594.7	17.4
50°-60°	533.0	15.6
60°-70°	417.3	12.2
70°-80°	269.1	7.9
80°-90°	79.5	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°	937.8	27.5
0°-40°	1521.4	44.5
0°-60°	2649.1	77.6
0°-90°	3415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1224	1224	1224	1224	1224	
5°	1211	1214	1220	1222	1224	115
15°	1152	1158	1168	1178	1179	325
25°	1042	1052	1074	1088	1095	480
35°	892	903	934	962	972	558
45°	717	733	771	811	822	554
55°	534	551	598	639	656	479
65°	350	371	427	468	488	348
75°	178	206	263	308	324	191
85°	43	59	76	76	76	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1223.7	1223.7	1223.7	1223.7	1223.7
2.5°	1215.7	1218.9	1225.3	1226.9	1226.9
5°	1211.0	1214.1	1220.5	1222.1	1223.7
7.5°	1203.0	1204.6	1212.5	1215.7	1217.3
10°	1190.2	1193.4	1201.4	1206.2	1207.8
12.5°	1172.7	1177.5	1187.1	1193.4	1195.0
15°	1152.0	1158.4	1167.9	1177.5	1179.1
17.5°	1129.7	1136.1	1148.8	1160.0	1163.2
20°	1102.6	1110.6	1124.9	1137.7	1142.4
22.5°	1075.5	1081.9	1099.4	1115.4	1120.1
25°	1042.1	1051.6	1073.9	1088.3	1094.6
27.5°	1007.0	1018.2	1040.5	1059.6	1066.0
30°	970.4	981.5	1005.4	1029.3	1037.3
32.5°	932.1	944.9	973.5	997.4	1005.4
35°	892.3	903.4	933.7	962.4	971.9
37.5°	850.9	860.4	895.5	925.7	935.3
40°	806.2	819.0	855.6	890.7	900.2
42.5°	761.6	776.0	812.6	850.9	860.4
45°	717.0	732.9	771.2	811.0	822.2
47.5°	674.0	686.7	729.8	768.0	783.9
50°	627.8	640.5	682.0	725.0	740.9
52.5°	580.0	597.5	642.1	683.6	702.7
55°	533.8	551.3	597.5	638.9	656.5
57.5°	490.8	505.1	552.9	595.9	613.4
60°	444.5	457.3	508.3	554.5	570.4
62.5°	395.2	414.3	466.9	509.9	529.0
65°	350.5	371.3	427.0	468.4	487.6
67.5°	309.1	328.2	382.4	427.0	447.7
70°	261.3	286.8	342.6	387.2	406.3
72.5°	223.1	245.4	302.7	347.4	368.1
75°	178.5	205.5	262.9	307.5	323.5
77.5°	141.8	168.9	223.1	258.1	266.1
80°	103.6	130.7	181.6	199.2	204.0
82.5°	70.1	95.6	130.7	135.4	137.0
85°	43.0	59.0	76.5	76.5	76.5
87.5°	20.7	23.9	27.1	25.5	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)