

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: P313250

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CP125-W2A-U-3000K**

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: P313250
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L83050-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 3296.0 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

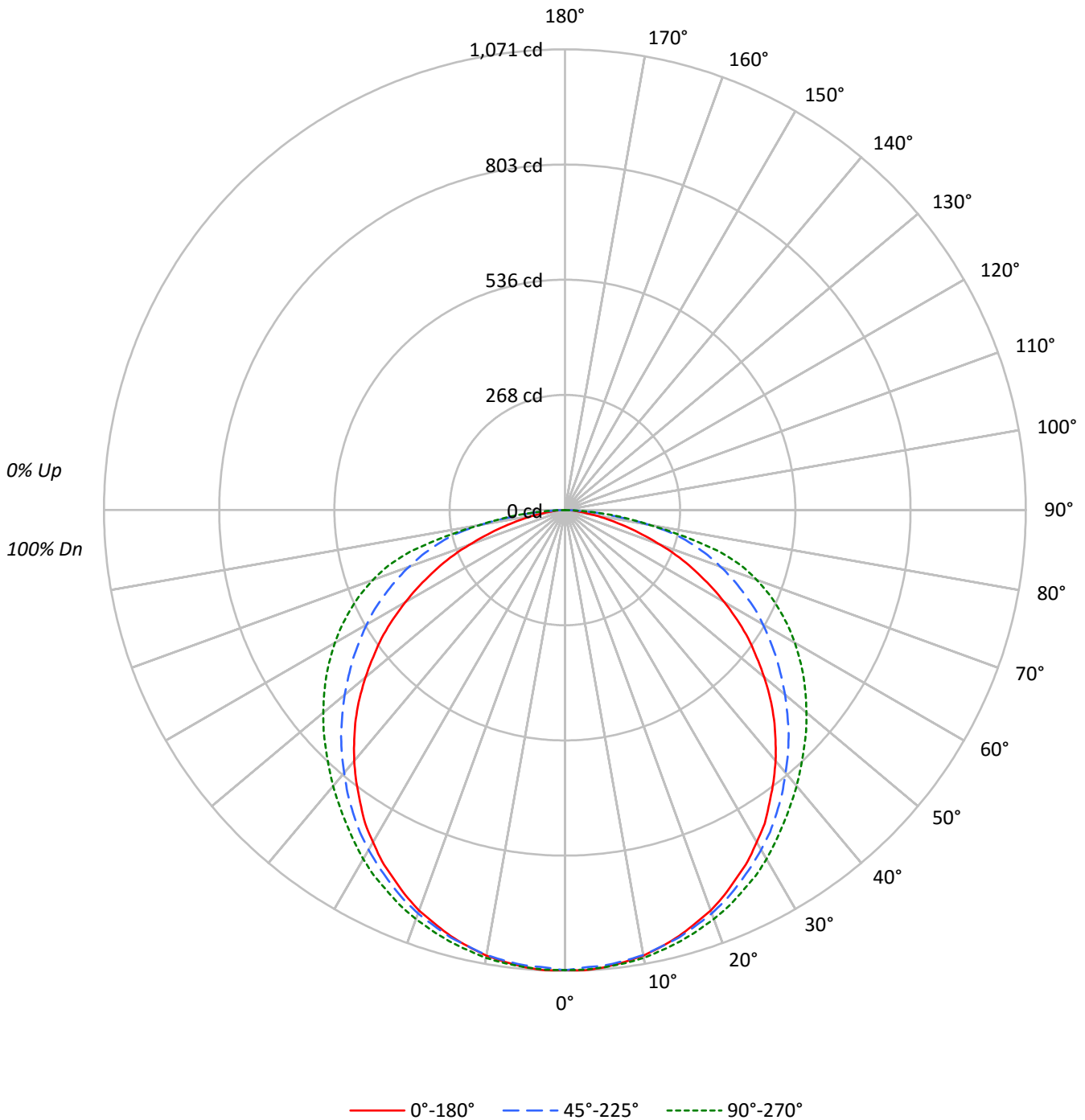
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1439	1439	1439
5°	1441	1435	1441
10°	1437	1435	1444
15°	1428	1432	1445
20°	1419	1428	1448
25°	1401	1422	1450
30°	1385	1417	1456
35°	1362	1410	1457
40°	1338	1401	1471
45°	1308	1400	1494
50°	1265	1398	1534
55°	1220	1408	1589
60°	1151	1429	1660
65°	1063	1463	1753
70°	928	1515	1867
75°	753	1592	1930
80°	556	1561	1561
85°	426	1150	1300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	3.1
10°-20°	290.9	8.8
20°-30°	442.9	13.4
30°-40°	537.8	16.3
40°-50°	568.1	17.2
50°-60°	536.1	16.3
60°-70°	445.7	13.5
70°-80°	293.3	8.9
80°-90°	79.9	2.4
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°	835.1	25.3
0°-40°	1372.8	41.7
0°-60°	2477.1	75.2
0°-90°	3296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3296.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1069	1069	1069	1069	1069	
5°	1067	1067	1062	1067	1067	101
15°	1025	1027	1028	1038	1038	289
25°	944	949	958	974	977	435
35°	829	839	858	880	887	519
45°	687	701	736	771	785	529
55°	520	542	600	657	678	463
65°	334	373	460	527	551	330
75°	145	211	306	363	371	156
85°	28	61	74	83	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1069.4	1069.4	1069.4	1069.4	1069.4
2.5°	1070.8	1069.4	1063.9	1069.4	1069.4
5°	1066.6	1066.6	1062.5	1066.6	1066.6
7.5°	1059.7	1059.7	1057.0	1062.5	1062.5
10°	1051.5	1051.5	1050.1	1057.0	1057.0
12.5°	1039.0	1040.4	1039.0	1047.3	1047.3
15°	1025.2	1026.6	1028.0	1037.7	1037.7
17.5°	1007.3	1010.1	1012.8	1023.9	1025.2
20°	990.7	992.1	997.6	1010.1	1011.4
22.5°	968.7	972.8	979.7	992.1	996.3
25°	943.8	949.3	957.6	974.2	976.9
27.5°	920.4	924.5	935.5	953.5	959.0
30°	891.4	898.3	912.1	930.0	936.9
32.5°	863.8	870.7	887.2	906.6	912.1
35°	829.3	839.0	858.3	880.3	887.2
37.5°	796.2	805.8	829.3	854.1	862.4
40°	761.7	772.7	797.6	826.5	837.6
42.5°	724.4	739.6	767.2	798.9	811.4
45°	687.2	701.0	735.5	771.3	785.1
47.5°	647.2	663.7	701.0	743.7	760.3
50°	604.4	625.1	667.9	714.8	732.7
52.5°	561.6	585.1	633.4	685.8	705.1
55°	520.2	542.3	600.2	656.8	677.5
57.5°	474.7	502.3	565.7	626.5	647.2
60°	427.8	458.1	531.2	594.7	616.8
62.5°	380.8	415.3	498.1	561.6	585.1
65°	333.9	372.6	459.5	527.1	550.6
67.5°	288.4	331.2	423.6	491.2	514.7
70°	236.0	289.8	385.0	451.2	474.7
72.5°	187.7	249.8	347.7	409.8	430.5
75°	144.9	211.1	306.3	362.9	371.2
77.5°	106.2	172.5	263.6	282.9	284.3
80°	71.8	138.0	201.5	198.7	201.5
82.5°	46.9	103.5	126.9	142.1	143.5
85°	27.6	60.7	74.5	82.8	84.2
87.5°	13.8	20.7	26.2	27.6	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)