

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: P313247

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-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: P313247
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 3735.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

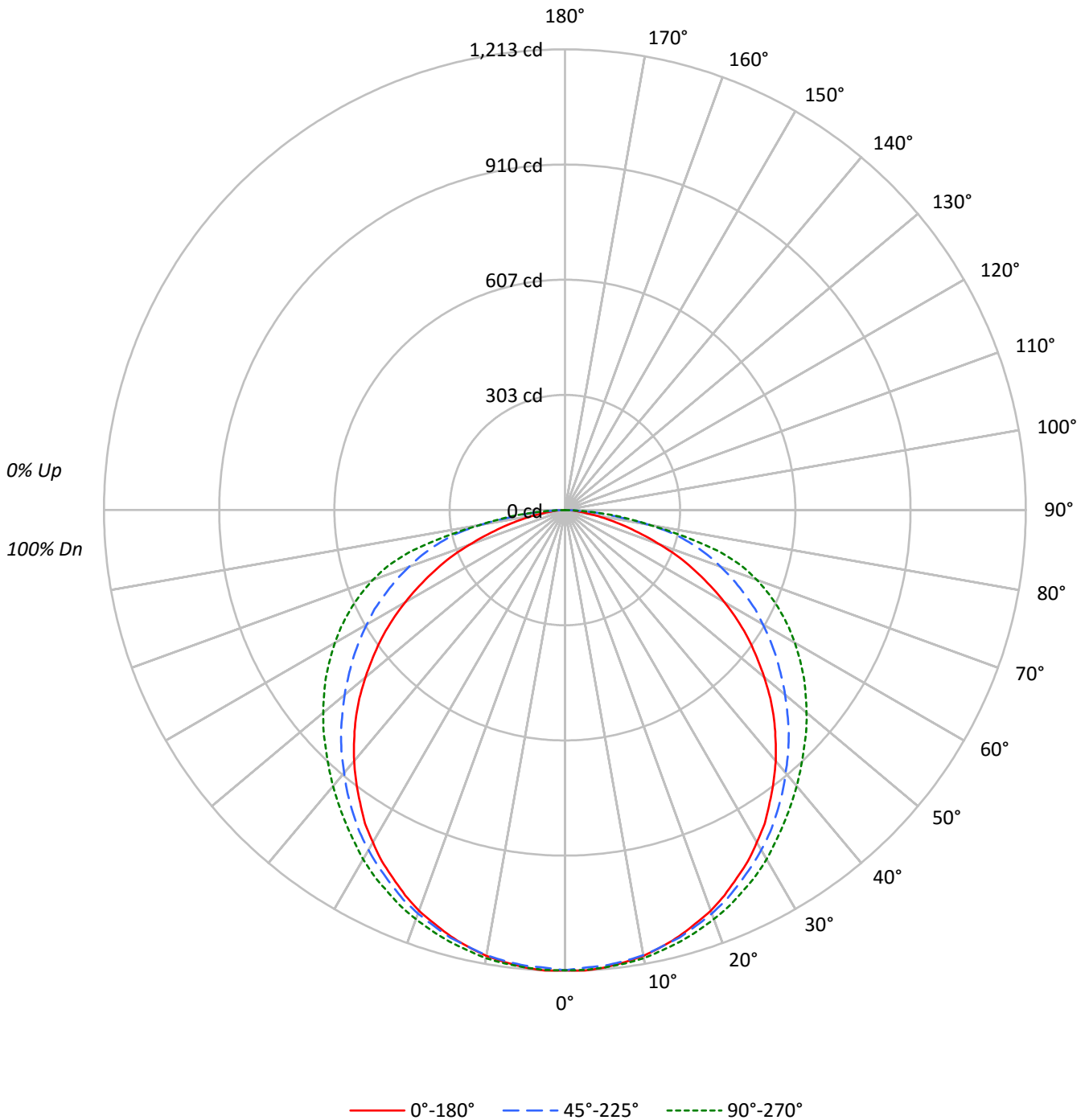
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1630	1630	1630
5°	1633	1626	1633
10°	1628	1626	1636
15°	1618	1623	1638
20°	1608	1619	1641
25°	1588	1611	1644
30°	1569	1606	1649
35°	1543	1598	1651
40°	1516	1587	1667
45°	1482	1586	1693
50°	1434	1584	1738
55°	1383	1596	1801
60°	1304	1620	1881
65°	1205	1658	1986
70°	1052	1716	2116
75°	854	1804	2187
80°	630	1769	1769
85°	483	1303	1473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	3.1
10°-20°	329.7	8.8
20°-30°	501.9	13.4
30°-40°	609.4	16.3
40°-50°	643.8	17.2
50°-60°	607.5	16.3
60°-70°	505.1	13.5
70°-80°	332.3	8.9
80°-90°	90.6	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°	946.3	25.3
0°-40°	1555.7	41.7
0°-60°	2807.0	75.2
0°-90°	3735.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3735.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1212	1212	1212	1212	1212	
5°	1209	1209	1204	1209	1209	115
15°	1162	1163	1165	1176	1176	328
25°	1070	1076	1085	1104	1107	493
35°	940	951	973	998	1005	588
45°	779	794	833	874	890	600
55°	590	614	680	744	768	525
65°	378	422	521	597	624	374
75°	164	239	347	411	421	177
85°	31	69	84	94	95	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1211.8	1211.8	1211.8	1211.8	1211.8
2.5°	1213.4	1211.8	1205.6	1211.8	1211.8
5°	1208.7	1208.7	1204.0	1208.7	1208.7
7.5°	1200.9	1200.9	1197.8	1204.0	1204.0
10°	1191.5	1191.5	1189.9	1197.8	1197.8
12.5°	1177.4	1179.0	1177.4	1186.8	1186.8
15°	1161.8	1163.4	1164.9	1175.9	1175.9
17.5°	1141.5	1144.6	1147.7	1160.2	1161.8
20°	1122.7	1124.3	1130.5	1144.6	1146.2
22.5°	1097.7	1102.4	1110.2	1124.3	1129.0
25°	1069.5	1075.8	1085.2	1103.9	1107.1
27.5°	1043.0	1047.6	1060.2	1080.5	1086.7
30°	1010.1	1017.9	1033.6	1053.9	1061.7
32.5°	978.8	986.7	1005.4	1027.3	1033.6
35°	939.7	950.7	972.6	997.6	1005.4
37.5°	902.2	913.2	939.7	967.9	977.3
40°	863.1	875.6	903.8	936.6	949.1
42.5°	820.9	838.1	869.4	905.3	919.4
45°	778.7	794.3	833.4	874.1	889.7
47.5°	733.3	752.1	794.3	842.8	861.6
50°	684.9	708.3	756.8	810.0	830.3
52.5°	636.4	663.0	717.7	777.1	799.0
55°	589.5	614.5	680.2	744.3	767.7
57.5°	537.9	569.2	641.1	709.9	733.3
60°	484.7	519.1	602.0	673.9	698.9
62.5°	431.6	470.7	564.5	636.4	663.0
65°	378.4	422.2	520.7	597.3	623.9
67.5°	326.8	375.3	480.0	556.7	583.2
70°	267.4	328.4	436.3	511.3	537.9
72.5°	212.7	283.0	394.0	464.4	487.9
75°	164.2	239.2	347.1	411.2	420.6
77.5°	120.4	195.5	298.7	320.5	322.1
80°	81.3	156.4	228.3	225.2	228.3
82.5°	53.2	117.3	143.9	161.1	162.6
85°	31.3	68.8	84.4	93.8	95.4
87.5°	15.6	23.5	29.7	31.3	34.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)