

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: METALUX

Report Number: P295043

Luminaire Tested: **24CZ2-50HE-HRP-UNV-L930-CD1-U**

Issue Date: 12/2/2019

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: P295043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50HE-HRP-UNV-L930-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (224) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3218.3 lumens
Efficiency: N/A
Efficacy: 83.4 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

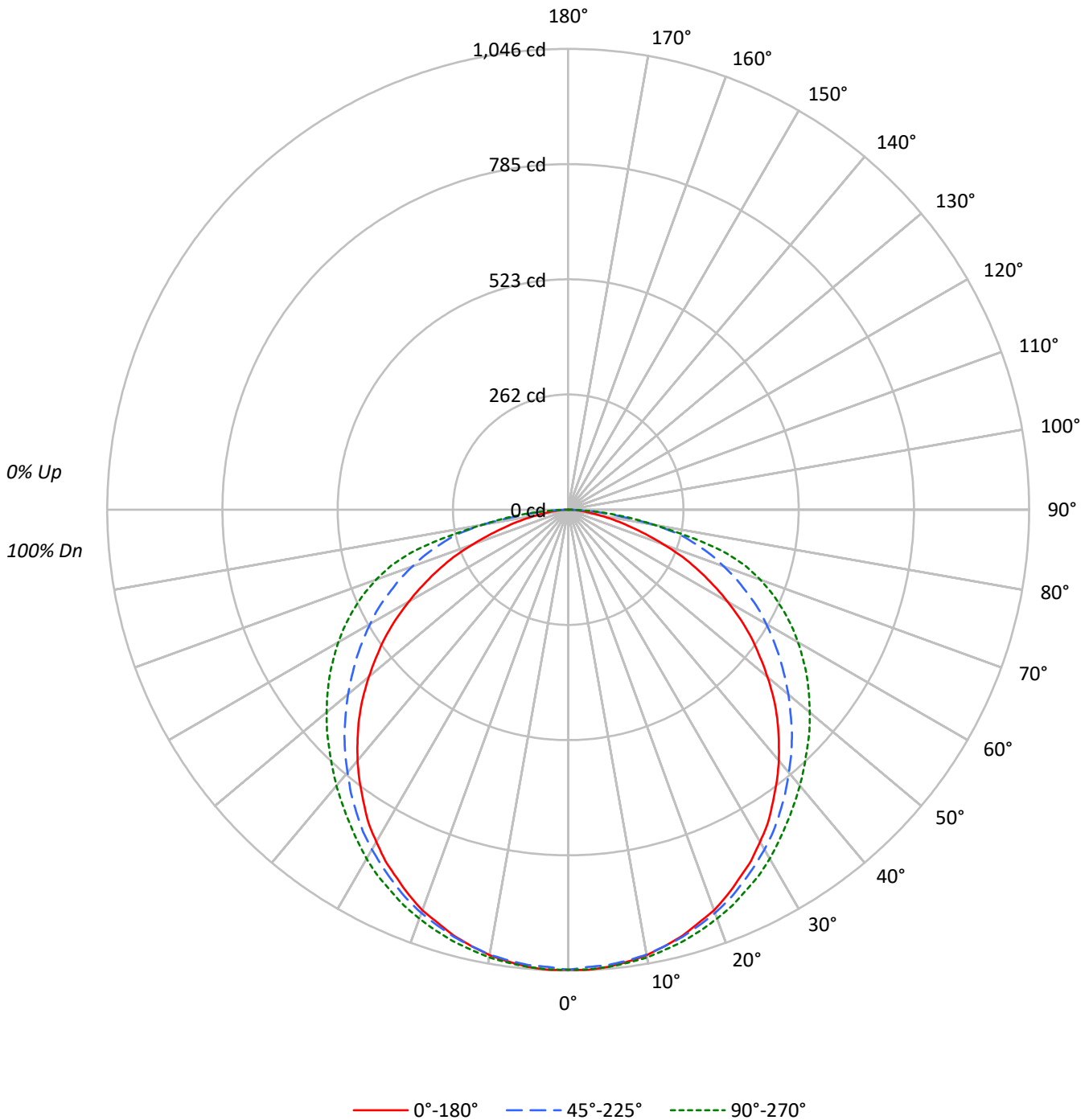
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1405	1405	1405
5°	1407	1401	1407
10°	1403	1401	1410
15°	1394	1398	1411
20°	1385	1395	1414
25°	1368	1388	1416
30°	1352	1384	1421
35°	1330	1376	1423
40°	1306	1368	1436
45°	1277	1366	1459
50°	1235	1365	1497
55°	1191	1375	1552
60°	1124	1396	1621
65°	1038	1429	1712
70°	906	1479	1823
75°	736	1555	1884
80°	543	1524	1524
85°	415	1124	1269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.9	3.1
10°-20°	284.0	8.8
20°-30°	432.4	13.4
30°-40°	525.1	16.3
40°-50°	554.7	17.2
50°-60°	523.5	16.3
60°-70°	435.2	13.5
70°-80°	286.3	8.9
80°-90°	78.0	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°	815.4	25.3
0°-40°	1340.5	41.7
0°-60°	2418.6	75.2
0°-90°	3218.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3218.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1042	1042	1037	1042	1042	99
15°	1001	1002	1004	1013	1013	282
25°	922	927	935	951	954	425
35°	810	819	838	860	866	507
45°	671	684	718	753	767	517
55°	508	530	586	641	662	452
65°	326	364	449	515	538	322
75°	142	206	299	354	362	152
85°	27	59	73	81	82	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1044.2	1044.2	1044.2	1044.2	1044.2
2.5°	1045.5	1044.2	1038.8	1044.2	1044.2
5°	1041.5	1041.5	1037.4	1041.5	1041.5
7.5°	1034.7	1034.7	1032.0	1037.4	1037.4
10°	1026.7	1026.7	1025.3	1032.0	1032.0
12.5°	1014.5	1015.9	1014.5	1022.6	1022.6
15°	1001.1	1002.4	1003.7	1013.2	1013.2
17.5°	983.5	986.2	988.9	999.7	1001.1
20°	967.4	968.7	974.1	986.2	987.6
22.5°	945.8	949.9	956.6	968.7	972.8
25°	921.6	927.0	935.0	951.2	953.9
27.5°	898.7	902.7	913.5	931.0	936.4
30°	870.4	877.1	890.6	908.1	914.8
32.5°	843.4	850.2	866.3	885.2	890.6
35°	809.7	819.2	838.0	859.6	866.3
37.5°	777.4	786.8	809.7	834.0	842.1
40°	743.7	754.5	778.7	807.0	817.8
42.5°	707.3	722.2	749.1	780.1	792.2
45°	671.0	684.4	718.1	753.1	766.6
47.5°	631.9	648.1	684.4	726.2	742.4
50°	590.1	610.3	652.1	697.9	715.4
52.5°	548.4	571.3	618.4	669.6	688.5
55°	507.9	529.5	586.1	641.3	661.5
57.5°	463.5	490.4	552.4	611.7	631.9
60°	417.7	447.3	518.7	580.7	602.2
62.5°	371.9	405.5	486.4	548.4	571.3
65°	326.1	363.8	448.7	514.7	537.6
67.5°	281.6	323.4	413.6	479.6	502.5
70°	230.4	282.9	375.9	440.6	463.5
72.5°	183.2	243.9	339.5	400.2	420.4
75°	141.5	206.1	299.1	354.3	362.4
77.5°	103.7	168.4	257.3	276.2	277.5
80°	70.1	134.7	196.7	194.0	196.7
82.5°	45.8	101.0	124.0	138.8	140.1
85°	26.9	59.3	72.8	80.8	82.2
87.5°	13.5	20.2	25.6	26.9	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)