

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: P295046

Luminaire Tested: **24CZ2-50HE-HRP-UNV-L950-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: P295046
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-L950-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (224) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3536.7 lumens
Efficiency: N/A
Efficacy: 91.6 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

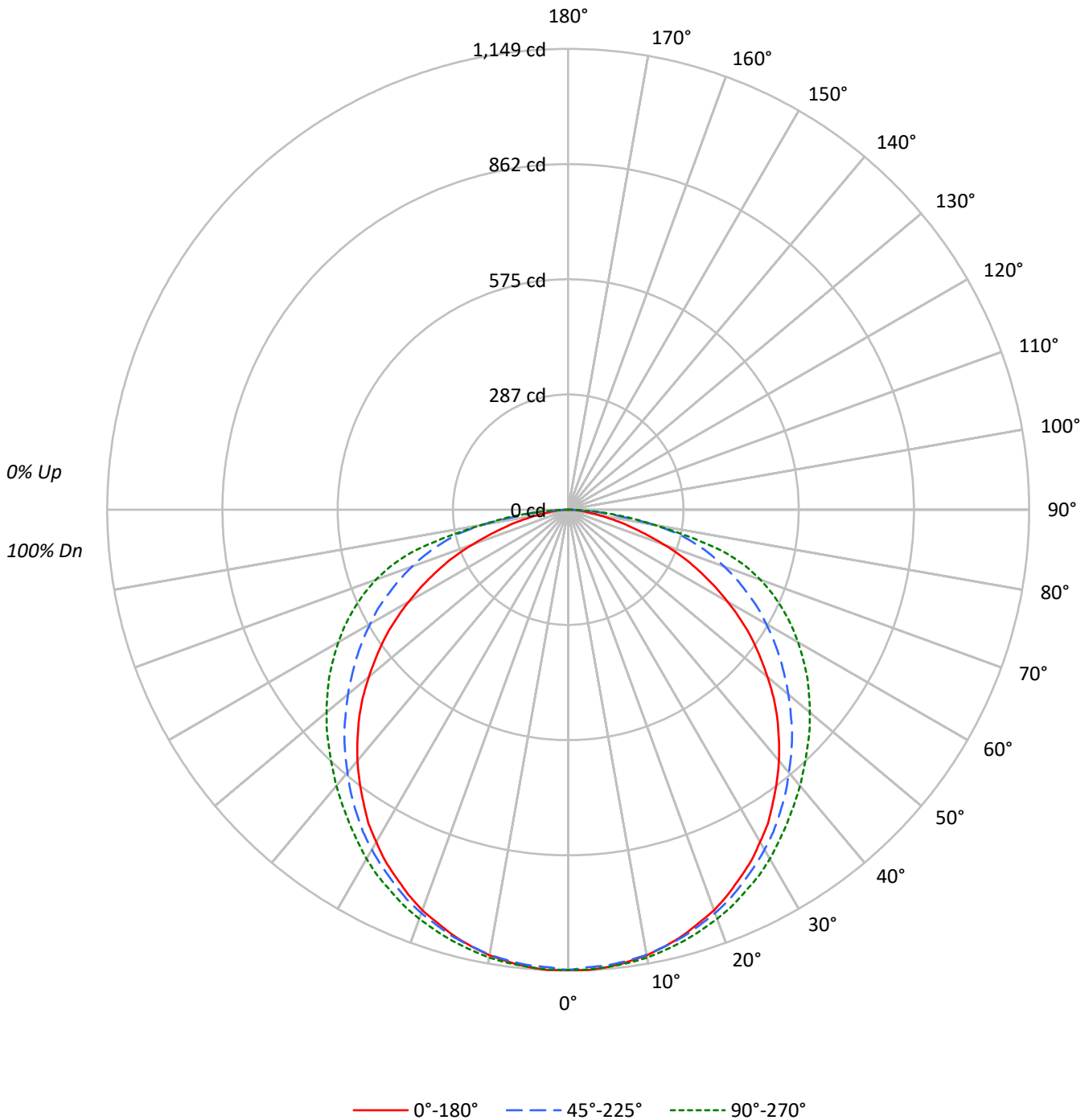
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1544	1544	1544
5°	1546	1540	1546
10°	1541	1539	1550
15°	1532	1537	1551
20°	1522	1533	1554
25°	1503	1525	1556
30°	1486	1521	1562
35°	1462	1513	1564
40°	1436	1503	1578
45°	1403	1502	1603
50°	1357	1500	1646
55°	1309	1511	1705
60°	1235	1534	1781
65°	1141	1570	1881
70°	996	1625	2004
75°	808	1709	2071
80°	597	1675	1675
85°	457	1235	1394



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.7	3.1
10°-20°	312.2	8.8
20°-30°	475.2	13.4
30°-40°	577.0	16.3
40°-50°	609.6	17.2
50°-60°	575.2	16.3
60°-70°	478.3	13.5
70°-80°	314.7	8.9
80°-90°	85.8	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°	896.1	25.3
0°-40°	1473.1	41.7
0°-60°	2658.0	75.2
0°-90°	3536.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3536.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1144	1144	1140	1144	1144	109
15°	1100	1102	1103	1113	1113	310
25°	1013	1019	1028	1045	1048	467
35°	890	900	921	945	952	557
45°	737	752	789	828	842	568
55°	558	582	644	705	727	497
65°	358	400	493	566	591	354
75°	156	226	329	389	398	168
85°	30	65	80	89	90	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1147.5	1147.5	1147.5	1147.5	1147.5
2.5°	1149.0	1147.5	1141.6	1147.5	1147.5
5°	1144.5	1144.5	1140.1	1144.5	1144.5
7.5°	1137.1	1137.1	1134.2	1140.1	1140.1
10°	1128.2	1128.2	1126.8	1134.2	1134.2
12.5°	1114.9	1116.4	1114.9	1123.8	1123.8
15°	1100.1	1101.6	1103.1	1113.4	1113.4
17.5°	1080.9	1083.8	1086.8	1098.6	1100.1
20°	1063.1	1064.6	1070.5	1083.8	1085.3
22.5°	1039.4	1043.8	1051.2	1064.6	1069.0
25°	1012.7	1018.7	1027.5	1045.3	1048.3
27.5°	987.6	992.0	1003.9	1023.1	1029.0
30°	956.5	963.9	978.7	997.9	1005.3
32.5°	926.9	934.3	952.0	972.8	978.7
35°	889.9	900.2	920.9	944.6	952.0
37.5°	854.3	864.7	889.9	916.5	925.4
40°	817.3	829.1	855.8	886.9	898.7
42.5°	777.3	793.6	823.2	857.3	870.6
45°	737.3	752.2	789.2	827.7	842.5
47.5°	694.4	712.2	752.2	798.1	815.8
50°	648.5	670.7	716.6	767.0	786.2
52.5°	602.6	627.8	679.6	735.9	756.6
55°	558.2	581.9	644.1	704.8	727.0
57.5°	509.3	538.9	607.1	672.2	694.4
60°	459.0	491.6	570.0	638.1	661.8
62.5°	408.7	445.7	534.5	602.6	627.8
65°	358.3	399.8	493.0	565.6	590.8
67.5°	309.4	355.3	454.5	527.1	552.3
70°	253.2	310.9	413.1	484.2	509.3
72.5°	201.4	268.0	373.1	439.7	462.0
75°	155.5	226.5	328.7	389.4	398.3
77.5°	114.0	185.1	282.8	303.5	305.0
80°	77.0	148.1	216.2	213.2	216.2
82.5°	50.3	111.0	136.2	152.5	154.0
85°	29.6	65.1	80.0	88.8	90.3
87.5°	14.8	22.2	28.1	29.6	32.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)