

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: P294822

Luminaire Tested: **14CZ2-60HE-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: P294822
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-60HE-HRP-UNV-L950-CD1-U
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (196) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4141.4 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

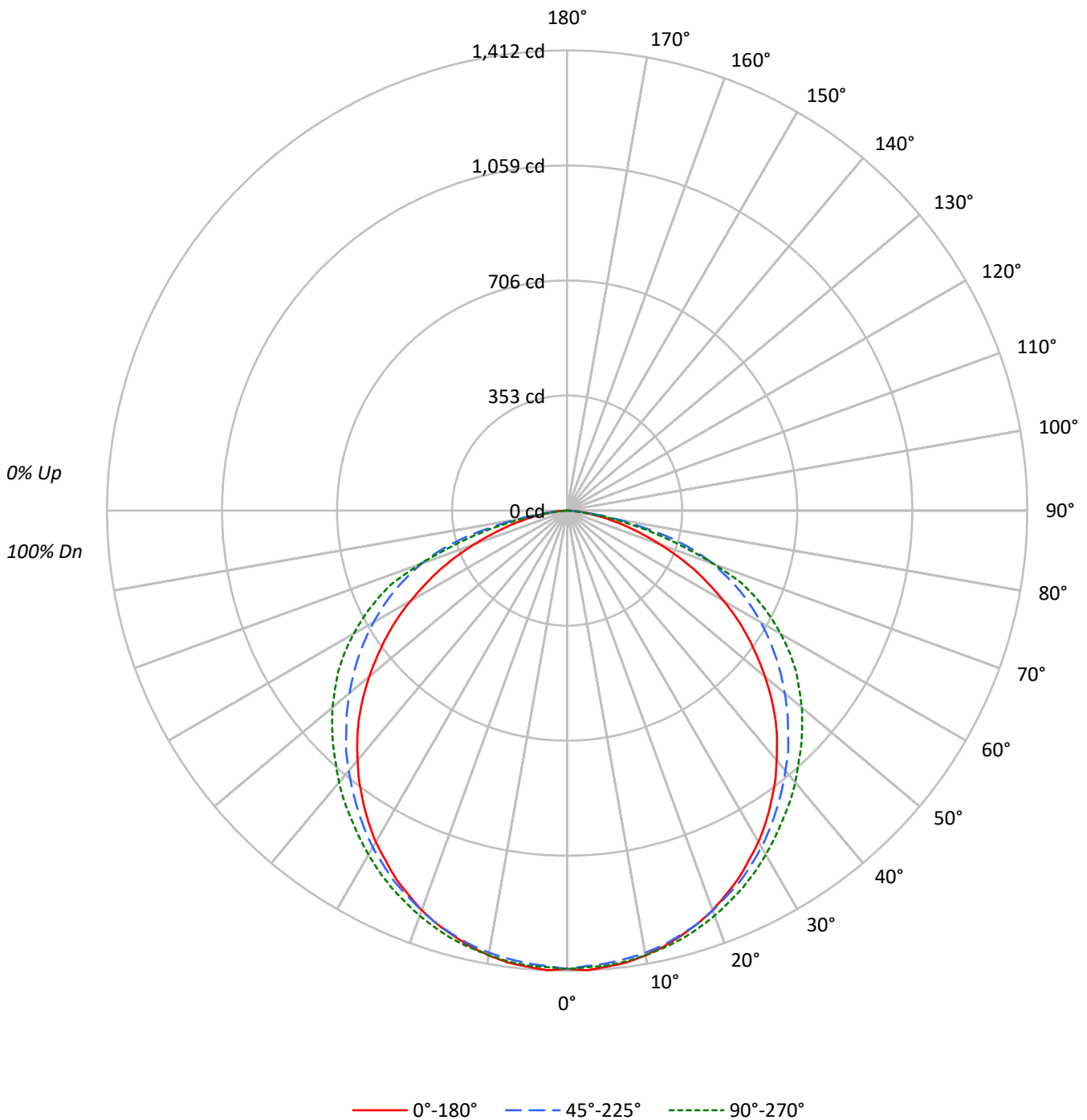
Input Watts (W): 48.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84					84			
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37					37			
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33					33			
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3785	3785	3785
5°	3796	3767	3785
10°	3786	3765	3786
15°	3762	3755	3791
20°	3737	3741	3789
25°	3697	3727	3789
30°	3650	3707	3787
35°	3585	3679	3795
40°	3513	3660	3824
45°	3440	3648	3866
50°	3320	3647	3936
55°	3177	3666	4020
60°	2986	3694	4072
65°	2753	3731	4096
70°	2397	3740	3770
75°	1976	3480	3046
80°	1554	2503	2038
85°	1207	966	482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	3.2
10°-20°	382.1	9.2
20°-30°	580.2	14.0
30°-40°	703.0	17.0
40°-50°	740.8	17.9
50°-60°	691.6	16.7
60°-70°	552.7	13.3
70°-80°	304.1	7.3
80°-90°	53.7	1.3
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°	1095.4	26.5
0°-40°	1798.5	43.4
0°-60°	3230.9	78.0
0°-90°	4141.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4141.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1405	1401	1395	1404	1401	134
15°	1350	1350	1348	1361	1361	381
25°	1245	1248	1255	1274	1276	573
35°	1091	1102	1120	1149	1155	683
45°	904	921	958	1001	1016	695
55°	677	711	781	836	857	605
65°	432	487	586	634	643	426
75°	190	272	335	301	293	205
85°	39	50	31	20	16	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1406.4	1406.4	1406.4	1406.4	1406.4
2.5°	1411.7	1407.7	1398.6	1406.4	1402.5
5°	1405.1	1401.2	1394.7	1403.8	1401.2
7.5°	1398.6	1393.4	1386.9	1397.3	1394.7
10°	1385.6	1381.7	1377.8	1386.9	1385.6
12.5°	1370.0	1368.7	1364.8	1375.2	1373.9
15°	1350.4	1350.4	1347.8	1360.9	1360.9
17.5°	1329.6	1328.3	1329.6	1343.9	1342.6
20°	1304.9	1304.9	1306.2	1323.1	1323.1
22.5°	1274.9	1276.2	1280.1	1301.0	1299.7
25°	1245.0	1247.6	1255.4	1273.6	1276.2
27.5°	1208.5	1215.0	1224.1	1246.3	1248.9
30°	1174.6	1178.5	1192.9	1213.7	1218.9
32.5°	1134.3	1142.1	1157.7	1181.2	1187.7
35°	1091.3	1101.7	1119.9	1148.6	1155.1
37.5°	1048.3	1057.4	1082.2	1112.1	1123.9
40°	1000.1	1015.8	1041.8	1075.7	1088.7
42.5°	953.3	968.9	1004.0	1039.2	1050.9
45°	903.8	920.7	958.5	1001.4	1015.8
47.5°	849.1	868.6	916.8	962.4	978.0
50°	793.1	817.8	871.2	922.0	940.2
52.5°	734.5	765.7	826.9	880.3	897.3
55°	677.2	711.0	781.4	836.1	856.9
57.5°	618.6	655.0	734.5	797.0	808.7
60°	554.8	599.0	686.3	741.0	756.6
62.5°	492.3	543.0	636.8	688.9	701.9
65°	432.4	487.0	586.0	634.2	643.3
67.5°	367.2	432.4	530.0	574.3	576.9
70°	304.7	380.3	475.3	496.2	479.2
72.5°	243.5	324.3	411.5	394.6	380.3
75°	190.1	272.2	334.7	300.8	293.0
77.5°	140.6	222.7	239.6	221.4	207.1
80°	100.3	175.8	161.5	138.0	131.5
82.5°	69.0	110.7	88.6	69.0	59.9
85°	39.1	49.5	31.3	19.5	15.6
87.5°	16.9	11.7	6.5	5.2	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)