

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: P475511

Luminaire Tested: **14CZ2-60HE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475511
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-60HE-SQR-UNV-L840-CD1-U
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5778.7 lumens
Efficiency: N/A
Efficacy: 129.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.34 / 1.43
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

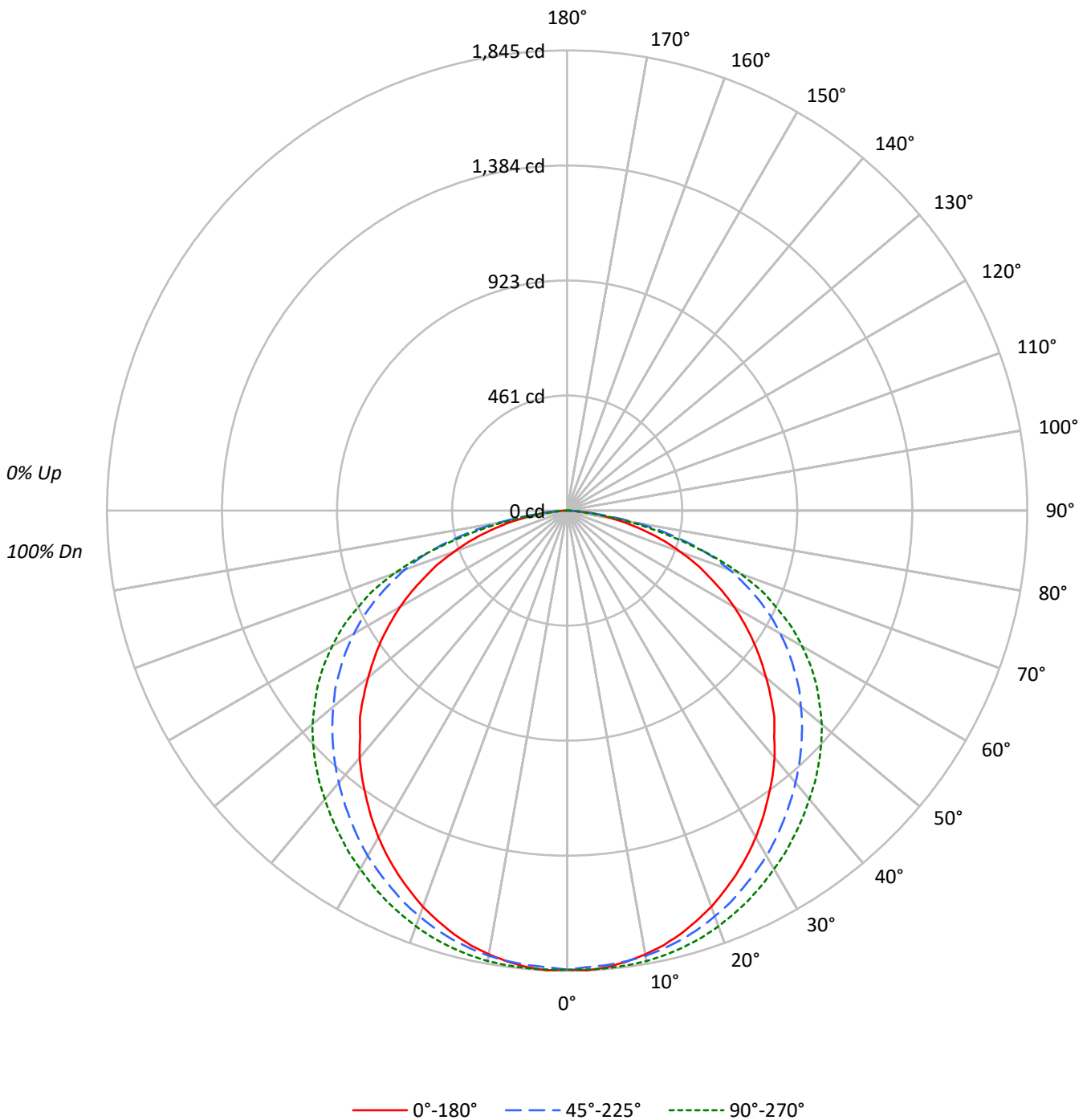
Input Watts (W): 44.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	74	81	76	72	77	74	70	68
3	89	78	69	63	86	76	68	62	73	67	61	70	65	60	68	63	59	57
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	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	43	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	37	31	27	25
10	52	38	30	25	50	38	30	25	37	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4953	4953	4953
5°	4963	4941	4976
10°	4935	4953	5011
15°	4896	4959	5046
20°	4841	4958	5079
25°	4772	4956	5116
30°	4700	4969	5156
35°	4615	4974	5221
40°	4545	5004	5308
45°	4471	5055	5433
50°	4358	5123	5580
55°	4272	5213	5726
60°	4162	5313	5857
65°	4000	5403	5922
70°	3787	5443	5815
75°	3461	5259	5022
80°	2907	4299	3742
85°	2115	2167	1411



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.8	3.0
10°-20°	503.7	8.7
20°-30°	770.2	13.3
30°-40°	945.3	16.4
40°-50°	1016.6	17.6
50°-60°	975.9	16.9
60°-70°	808.5	14.0
70°-80°	484.5	8.4
80°-90°	99.2	1.7
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°	1448.7	25.1
0°-40°	2394.0	41.4
0°-60°	4386.5	75.9
0°-90°	5778.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5778.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1840	1840	1840	1840	1840	
5°	1837	1834	1829	1844	1842	174
15°	1757	1765	1780	1808	1811	495
25°	1607	1633	1669	1713	1723	740
35°	1405	1452	1514	1573	1589	880
45°	1175	1237	1328	1402	1428	903
55°	910	997	1111	1193	1220	813
65°	628	731	848	915	930	623
75°	333	434	506	494	483	352
85°	68	100	70	47	46	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1840.5	1840.5	1840.5	1840.5	1840.5
2.5°	1845.4	1840.5	1832.3	1845.4	1842.1
5°	1837.2	1834.0	1829.1	1843.7	1842.1
7.5°	1824.2	1824.2	1822.5	1840.5	1838.9
10°	1806.2	1809.5	1812.7	1834.0	1834.0
12.5°	1785.0	1788.3	1798.1	1822.5	1824.2
15°	1757.3	1765.4	1780.1	1807.9	1811.1
17.5°	1724.6	1737.7	1757.3	1789.9	1794.8
20°	1690.4	1705.1	1731.2	1767.1	1773.6
22.5°	1649.6	1670.8	1703.4	1741.0	1749.1
25°	1607.2	1633.3	1669.2	1713.2	1723.0
27.5°	1561.5	1592.5	1634.9	1680.6	1692.0
30°	1512.5	1548.4	1599.0	1648.0	1659.4
32.5°	1460.3	1502.7	1558.2	1612.1	1626.7
35°	1404.8	1452.2	1514.2	1572.9	1589.2
37.5°	1351.0	1401.6	1470.1	1533.7	1551.7
40°	1293.9	1347.7	1424.4	1491.3	1510.9
42.5°	1228.6	1293.9	1377.1	1448.9	1471.7
45°	1174.8	1236.8	1328.2	1401.6	1427.7
47.5°	1107.9	1179.7	1277.6	1355.9	1382.0
50°	1041.0	1122.6	1223.7	1305.3	1333.0
52.5°	975.7	1058.9	1171.5	1251.5	1275.9
55°	910.5	996.9	1111.1	1192.7	1220.5
57.5°	841.9	936.6	1052.4	1134.0	1156.8
60°	773.4	868.0	987.1	1065.5	1088.3
62.5°	701.6	802.8	921.9	993.7	1016.5
65°	628.2	731.0	848.5	915.3	930.0
67.5°	559.7	664.1	770.1	832.1	846.8
70°	481.3	592.3	691.8	737.5	739.1
72.5°	409.5	512.3	607.0	620.0	616.8
75°	332.9	434.0	505.8	494.4	483.0
77.5°	257.8	360.6	398.1	365.5	357.3
80°	187.6	280.6	277.4	246.4	241.5
82.5°	128.9	194.2	159.9	130.5	120.7
85°	68.5	99.5	70.2	47.3	45.7
87.5°	26.1	24.5	14.7	9.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)