

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: P475475

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475475
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-60HE-HRP-UNV-L840-CD1-U
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4927.2 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

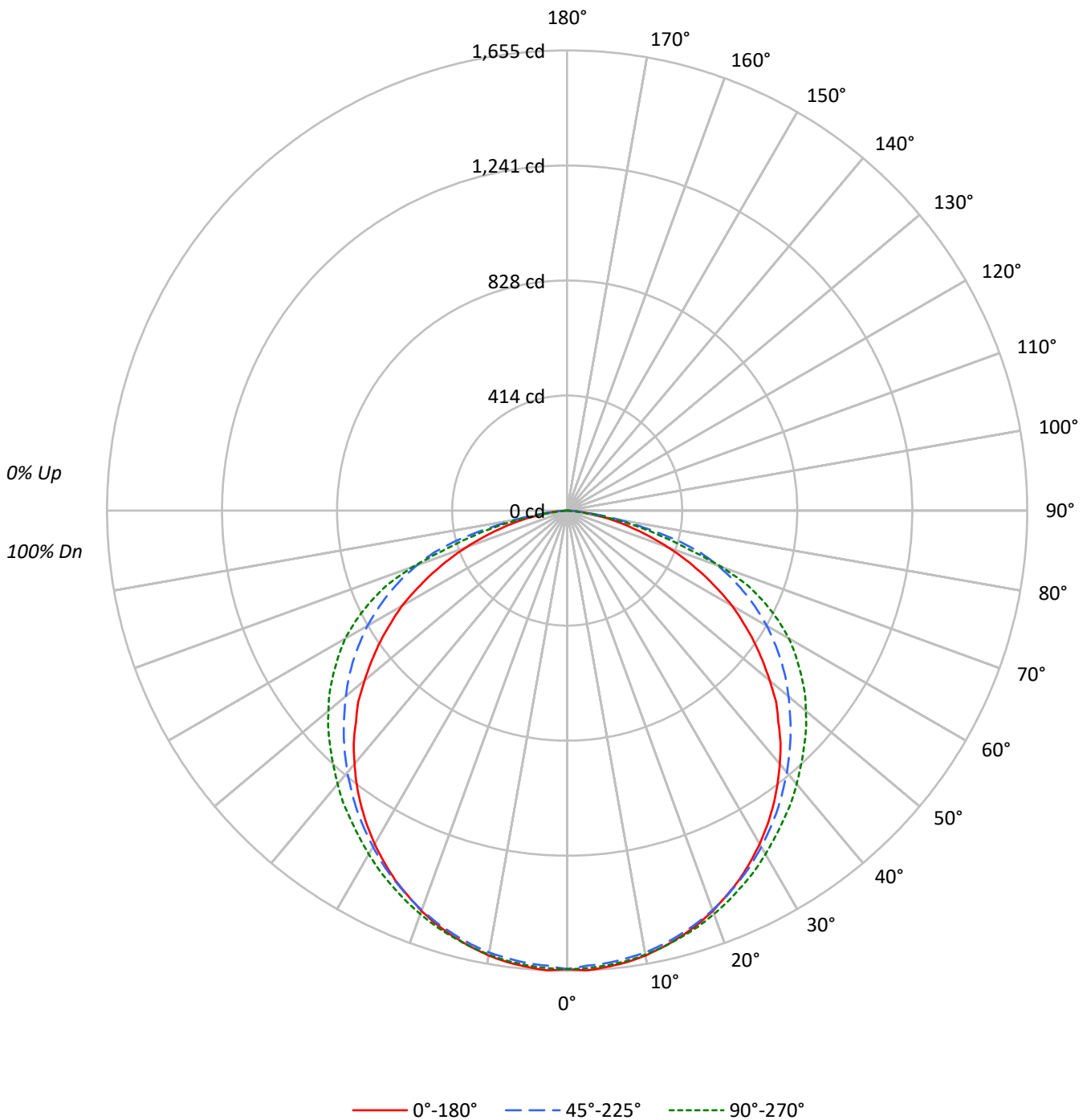
Input Watts (W): 44.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37					37			
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32					32			
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29					29			
9	56	42	34	28	54	41	33	28	40	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4438	4438	4438
5°	4451	4414	4434
10°	4440	4411	4431
15°	4416	4395	4425
20°	4387	4378	4422
25°	4350	4359	4422
30°	4302	4340	4434
35°	4248	4328	4458
40°	4179	4318	4510
45°	4088	4325	4585
50°	3980	4350	4694
55°	3847	4404	4818
60°	3693	4462	4962
65°	3410	4504	4989
70°	3040	4525	4620
75°	2546	4192	3590
80°	1932	2947	2357
85°	1362	1034	327



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.1	3.2
10°-20°	447.3	9.1
20°-30°	679.8	13.8
30°-40°	827.7	16.8
40°-50°	879.3	17.8
50°-60°	831.8	16.9
60°-70°	673.9	13.7
70°-80°	369.5	7.5
80°-90°	61.7	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°	1283.2	26.0
0°-40°	2110.9	42.8
0°-60°	3822.0	77.6
0°-90°	4927.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4927.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1649	1649	1649	1649	1649	
5°	1648	1645	1634	1645	1642	157
15°	1585	1582	1578	1590	1588	447
25°	1465	1465	1468	1488	1489	675
35°	1293	1298	1318	1349	1357	809
45°	1074	1091	1136	1188	1205	830
55°	820	856	939	1007	1027	732
65°	536	596	707	770	784	529
75°	245	338	403	356	345	262
85°	44	58	34	17	11	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1649.1	1649.1	1649.1	1649.1	1649.1
2.5°	1655.2	1649.1	1638.5	1649.1	1647.6
5°	1647.6	1644.6	1633.9	1644.6	1641.5
7.5°	1638.5	1635.4	1624.8	1636.9	1633.9
10°	1624.8	1621.7	1614.1	1624.8	1621.7
12.5°	1606.5	1605.0	1597.4	1609.6	1606.5
15°	1585.2	1582.2	1577.6	1589.8	1588.3
17.5°	1560.9	1557.8	1554.8	1570.0	1568.5
20°	1532.0	1530.5	1528.9	1545.7	1544.1
22.5°	1498.5	1498.5	1500.0	1518.3	1518.3
25°	1465.0	1465.0	1468.1	1487.9	1489.4
27.5°	1425.5	1428.5	1434.6	1455.9	1460.5
30°	1384.4	1387.5	1396.6	1420.9	1427.0
32.5°	1340.3	1344.9	1357.0	1385.9	1392.0
35°	1293.1	1297.7	1317.5	1349.4	1357.0
37.5°	1242.9	1250.5	1273.4	1309.9	1323.6
40°	1189.7	1201.8	1229.2	1268.8	1284.0
42.5°	1136.4	1147.1	1183.6	1229.2	1244.4
45°	1074.1	1090.8	1136.4	1188.2	1204.9
47.5°	1019.3	1034.5	1087.7	1145.6	1165.3
50°	950.8	973.6	1039.1	1103.0	1121.2
52.5°	885.4	915.8	990.4	1055.8	1077.1
55°	820.0	856.5	938.7	1007.1	1026.9
57.5°	751.5	791.1	883.9	953.9	975.2
60°	686.1	728.7	829.1	900.6	921.9
62.5°	608.5	661.8	769.8	838.3	856.5
65°	535.5	596.4	707.4	769.8	783.5
67.5°	461.0	532.5	643.5	698.3	702.9
70°	386.4	467.0	575.1	608.5	587.2
72.5°	313.4	403.2	502.0	474.7	450.3
75°	244.9	337.7	403.2	356.0	345.3
77.5°	181.0	276.9	281.4	258.6	251.0
80°	124.7	214.5	190.2	164.3	152.1
82.5°	80.6	132.4	105.0	77.6	70.0
85°	44.1	57.8	33.5	16.7	10.6
87.5°	16.7	10.6	4.6	4.6	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)