

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: P474587

Luminaire Tested: **24CZ2-60VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474587
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-SQR-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5507.2 lumens
Efficiency: N/A
Efficacy: 135.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

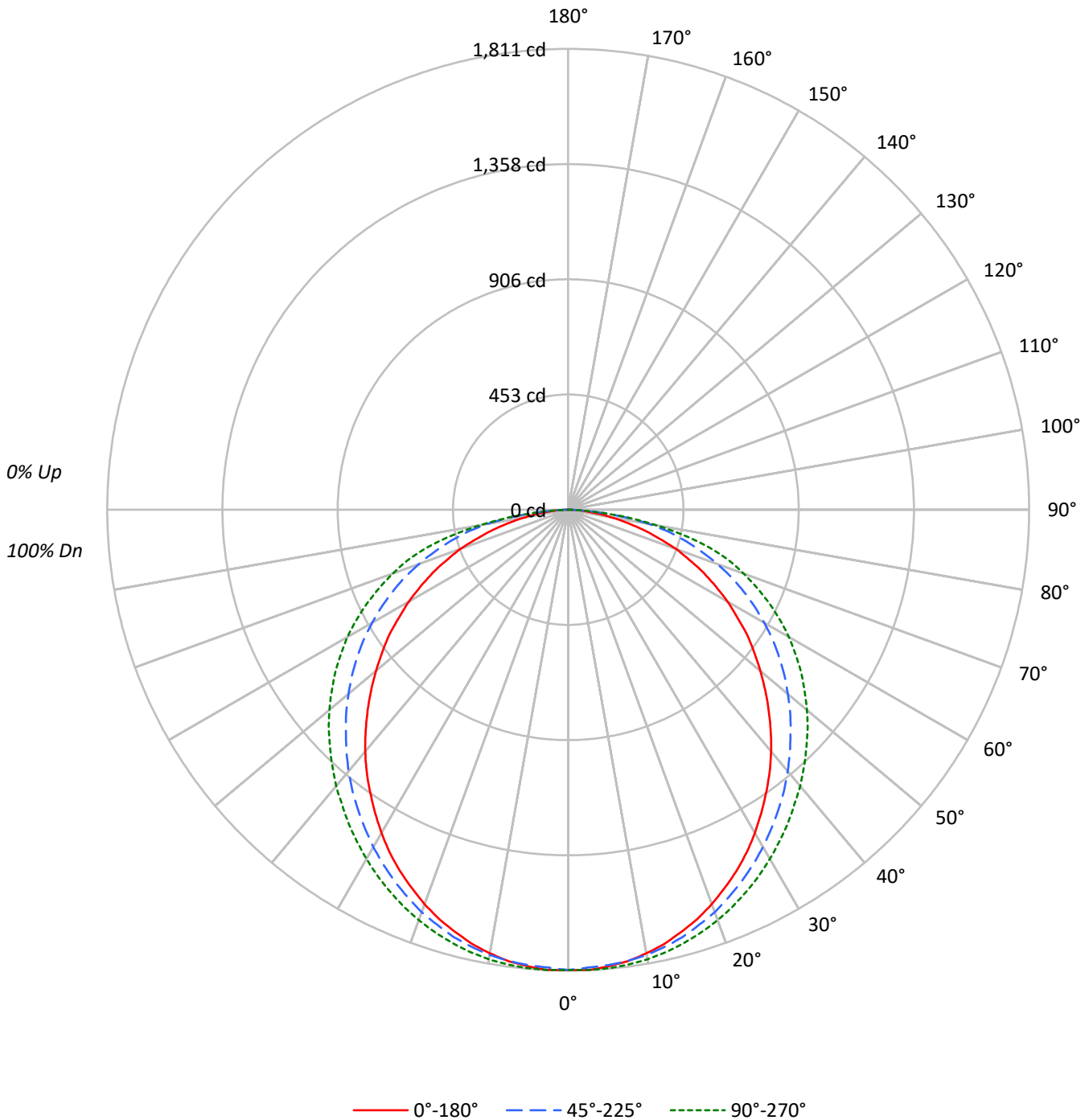
Input Watts (W): 40.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90		92	90	87		89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	69	59	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	39		50	43	38		49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34		46	39	34		44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	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	25		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4868	4868	4868
5°	4867	4853	4887
10°	4837	4854	4902
15°	4785	4844	4910
20°	4724	4820	4916
25°	4647	4786	4917
30°	4557	4757	4924
35°	4454	4729	4942
40°	4358	4714	4982
45°	4239	4701	5036
50°	4125	4715	5127
55°	4029	4747	5242
60°	3892	4782	5389
65°	3737	4840	5552
70°	3544	4908	5773
75°	3174	4976	5965
80°	2672	4990	5413
85°	1982	3776	3560



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.4	3.1
10°-20°	491.3	8.9
20°-30°	743.7	13.5
30°-40°	899.7	16.3
40°-50°	949.7	17.2
50°-60°	895.6	16.3
60°-70°	738.3	13.4
70°-80°	484.4	8.8
80°-90°	133.2	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°	1406.4	25.5
0°-40°	2306.1	41.9
0°-60°	4151.4	75.4
0°-90°	5507.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5507.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1809	1809	1809	1809	1809	
5°	1802	1802	1797	1809	1809	171
15°	1717	1727	1739	1759	1762	485
25°	1565	1585	1612	1645	1656	721
35°	1356	1391	1439	1489	1504	849
45°	1114	1164	1235	1301	1323	860
55°	859	919	1012	1088	1117	765
65°	587	657	760	841	872	579
75°	305	384	479	554	574	323
85°	64	111	122	119	115	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1809.0	1809.0	1809.0	1809.0	1809.0
2.5°	1810.7	1809.0	1801.0	1811.6	1810.7
5°	1801.9	1801.9	1796.6	1809.0	1809.0
7.5°	1789.6	1790.5	1788.7	1802.8	1802.8
10°	1770.2	1773.8	1776.4	1792.2	1794.0
12.5°	1747.4	1753.5	1758.8	1778.2	1779.9
15°	1717.4	1727.1	1738.6	1758.8	1762.3
17.5°	1686.7	1698.1	1710.4	1736.8	1741.2
20°	1649.7	1662.9	1683.1	1709.5	1716.6
22.5°	1608.3	1626.8	1647.9	1679.6	1688.4
25°	1565.2	1584.6	1611.9	1645.3	1655.9
27.5°	1518.6	1541.5	1572.3	1611.0	1622.4
30°	1466.7	1493.1	1530.9	1572.3	1584.6
32.5°	1412.1	1442.9	1485.2	1530.9	1545.0
35°	1355.8	1391.0	1439.4	1488.7	1504.5
37.5°	1300.4	1335.6	1392.8	1444.7	1459.7
40°	1240.6	1279.3	1341.8	1397.2	1418.3
42.5°	1177.2	1223.0	1289.0	1350.6	1370.8
45°	1113.9	1164.0	1235.3	1301.3	1323.3
47.5°	1049.6	1105.1	1183.4	1250.3	1275.8
50°	985.4	1044.4	1126.2	1198.3	1224.7
52.5°	920.3	981.9	1070.8	1147.3	1171.1
55°	858.7	919.4	1011.8	1087.5	1117.4
57.5°	787.5	856.1	953.7	1030.3	1059.3
60°	723.2	790.1	888.6	969.6	1001.3
62.5°	653.7	722.3	826.2	907.1	937.9
65°	586.9	657.2	760.2	841.1	871.9
67.5°	514.7	588.6	694.2	772.5	802.4
70°	450.5	520.0	623.8	703.9	733.8
72.5°	372.2	451.4	550.8	630.0	662.5
75°	305.3	383.6	478.6	554.3	573.7
77.5°	234.9	313.2	407.4	456.6	469.8
80°	172.4	246.4	322.0	348.4	349.3
82.5°	116.1	181.2	224.4	237.6	235.8
85°	64.2	110.9	122.3	118.8	115.3
87.5°	26.4	37.0	29.9	21.1	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)