

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: P474585

Luminaire Tested: **24CZ2-45VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474585
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-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: 4176.0 lumens
Efficiency: N/A
Efficacy: 136.0 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

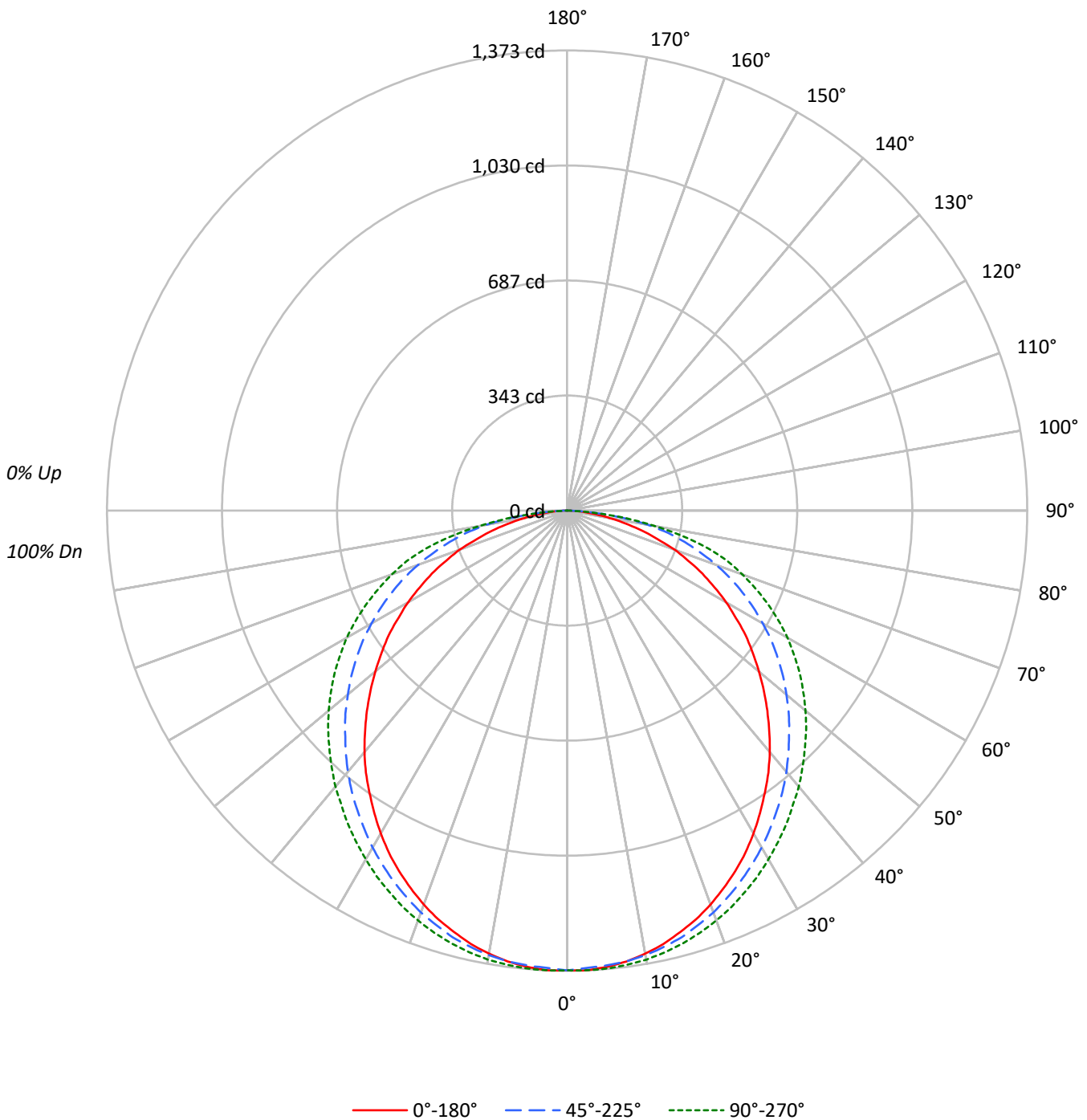
Input Watts (W): 30.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474585

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474585

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L830-CD1-U

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°	3691	3691	3691
5°	3691	3680	3705
10°	3668	3681	3717
15°	3628	3673	3723
20°	3582	3655	3727
25°	3524	3629	3728
30°	3456	3607	3734
35°	3377	3586	3748
40°	3305	3574	3778
45°	3214	3565	3819
50°	3128	3575	3888
55°	3055	3599	3975
60°	2951	3626	4086
65°	2833	3670	4210
70°	2688	3722	4378
75°	2407	3773	4523
80°	2027	3784	4105
85°	1504	2862	2699



TEST NUMBER: P474585

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	3.1
10°-20°	372.5	8.9
20°-30°	564.0	13.5
30°-40°	682.2	16.3
40°-50°	720.1	17.2
50°-60°	679.1	16.3
60°-70°	559.9	13.4
70°-80°	367.3	8.8
80°-90°	101.0	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°	1066.5	25.5
0°-40°	1748.7	41.9
0°-60°	3147.9	75.4
0°-90°	4176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4176.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1366	1366	1362	1372	1372	130
15°	1302	1310	1318	1334	1336	367
25°	1187	1202	1222	1248	1256	547
35°	1028	1055	1092	1129	1141	644
45°	845	883	937	987	1003	652
55°	651	697	767	825	847	580
65°	445	498	576	638	661	439
75°	232	291	363	420	435	245
85°	49	84	93	90	87	60
90°	0	0	0	0	0	



TEST NUMBER: P474585

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1373.0	1371.7	1365.7	1373.7	1373.0
5°	1366.4	1366.4	1362.4	1371.7	1371.7
7.5°	1357.0	1357.7	1356.3	1367.0	1367.0
10°	1342.3	1345.0	1347.0	1359.0	1360.4
12.5°	1325.0	1329.7	1333.7	1348.3	1349.7
15°	1302.3	1309.6	1318.3	1333.7	1336.3
17.5°	1279.0	1287.6	1297.0	1317.0	1320.3
20°	1250.9	1260.9	1276.3	1296.3	1301.6
22.5°	1219.6	1233.6	1249.6	1273.6	1280.3
25°	1186.9	1201.6	1222.2	1247.6	1255.6
27.5°	1151.5	1168.9	1192.2	1221.6	1230.3
30°	1112.2	1132.2	1160.9	1192.2	1201.6
32.5°	1070.8	1094.2	1126.2	1160.9	1171.5
35°	1028.1	1054.8	1091.5	1128.8	1140.9
37.5°	986.1	1012.8	1056.1	1095.5	1106.8
40°	940.7	970.1	1017.4	1059.5	1075.5
42.5°	892.7	927.4	977.4	1024.1	1039.4
45°	844.6	882.7	936.7	986.7	1003.4
47.5°	795.9	838.0	897.3	948.0	967.4
50°	747.2	791.9	854.0	908.7	928.7
52.5°	697.9	744.6	811.9	870.0	888.0
55°	651.2	697.2	767.2	824.6	847.3
57.5°	597.1	649.2	723.2	781.3	803.3
60°	548.4	599.1	673.8	735.2	759.2
62.5°	495.7	547.7	626.5	687.8	711.2
65°	445.0	498.4	576.4	637.8	661.2
67.5°	390.3	446.3	526.4	585.8	608.5
70°	341.6	394.3	473.0	533.7	556.4
72.5°	282.2	342.3	417.6	477.7	502.4
75°	231.5	290.9	362.9	420.3	435.0
77.5°	178.1	237.5	308.9	346.3	356.3
80°	130.8	186.8	244.2	264.2	264.9
82.5°	88.1	137.4	170.1	180.1	178.8
85°	48.7	84.1	92.7	90.1	87.4
87.5°	20.0	28.0	22.7	16.0	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)