

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: P474685

Luminaire Tested: **24CZ2-45VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474685
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-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4409.7 lumens
Efficiency: N/A
Efficacy: 143.6 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

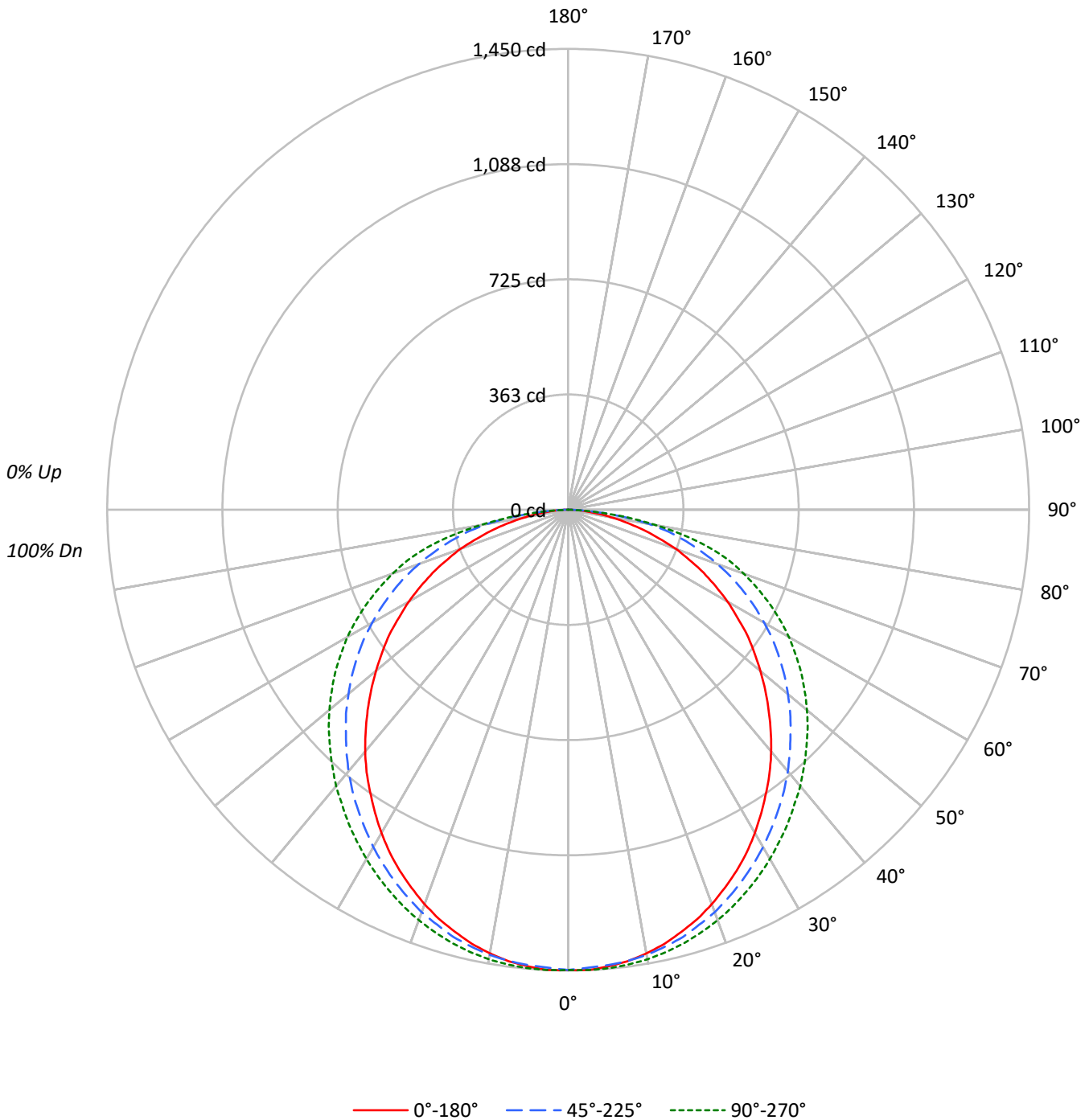
Input Watts (W): 30.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3898	3898	3898
5°	3897	3886	3913
10°	3873	3887	3925
15°	3831	3878	3931
20°	3783	3859	3936
25°	3721	3832	3937
30°	3649	3809	3943
35°	3566	3786	3958
40°	3489	3774	3990
45°	3394	3764	4032
50°	3303	3775	4106
55°	3226	3801	4198
60°	3117	3829	4315
65°	2992	3876	4446
70°	2838	3930	4623
75°	2542	3984	4775
80°	2140	3995	4334
85°	1587	3023	2850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.3	3.1
10°-20°	393.4	8.9
20°-30°	595.5	13.5
30°-40°	720.4	16.3
40°-50°	760.4	17.2
50°-60°	717.1	16.3
60°-70°	591.2	13.4
70°-80°	387.8	8.8
80°-90°	106.6	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°	1126.2	25.5
0°-40°	1846.5	41.9
0°-60°	3324.1	75.4
0°-90°	4409.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4409.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1443	1443	1439	1448	1448	137
15°	1375	1383	1392	1408	1411	388
25°	1253	1269	1291	1317	1326	577
35°	1086	1114	1153	1192	1205	680
45°	892	932	989	1042	1060	688
55°	688	736	810	871	895	613
65°	470	526	609	674	698	464
75°	244	307	383	444	459	258
85°	51	89	98	95	92	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1448.5	1448.5	1448.5	1448.5	1448.5
2.5°	1449.9	1448.5	1442.1	1450.6	1449.9
5°	1442.8	1442.8	1438.6	1448.5	1448.5
7.5°	1433.0	1433.7	1432.2	1443.5	1443.5
10°	1417.5	1420.3	1422.4	1435.1	1436.5
12.5°	1399.1	1404.1	1408.3	1423.8	1425.2
15°	1375.2	1382.9	1392.1	1408.3	1411.1
17.5°	1350.5	1359.7	1369.5	1390.7	1394.2
20°	1320.9	1331.5	1347.7	1368.8	1374.5
22.5°	1287.8	1302.6	1319.5	1344.9	1351.9
25°	1253.3	1268.8	1290.6	1317.4	1325.9
27.5°	1216.0	1234.3	1258.9	1289.9	1299.1
30°	1174.4	1195.5	1225.8	1258.9	1268.8
32.5°	1130.7	1155.4	1189.2	1225.8	1237.1
35°	1085.6	1113.8	1152.6	1192.0	1204.7
37.5°	1041.3	1069.4	1115.2	1156.8	1168.8
40°	993.3	1024.3	1074.4	1118.7	1135.7
42.5°	942.6	979.3	1032.1	1081.4	1097.6
45°	891.9	932.1	989.1	1042.0	1059.6
47.5°	840.5	884.9	947.6	1001.1	1021.5
50°	789.0	836.2	901.8	959.5	980.7
52.5°	736.9	786.2	857.4	918.7	937.7
55°	687.6	736.2	810.2	870.8	894.7
57.5°	630.5	685.5	763.7	825.0	848.2
60°	579.1	632.6	711.5	776.4	801.7
62.5°	523.4	578.4	661.5	726.3	751.0
65°	469.9	526.3	608.7	673.5	698.2
67.5°	412.1	471.3	555.9	618.6	642.5
70°	360.7	416.4	499.5	563.6	587.6
72.5°	298.0	361.4	441.0	504.4	530.5
75°	244.5	307.2	383.2	443.8	459.3
77.5°	188.1	250.8	326.2	365.6	376.2
80°	138.1	197.3	257.8	279.0	279.7
82.5°	93.0	145.1	179.6	190.2	188.8
85°	51.4	88.8	97.9	95.1	92.3
87.5°	21.1	29.6	24.0	16.9	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)