

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: P474614

Luminaire Tested: **24CZ2-45-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474614
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45-SQR-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

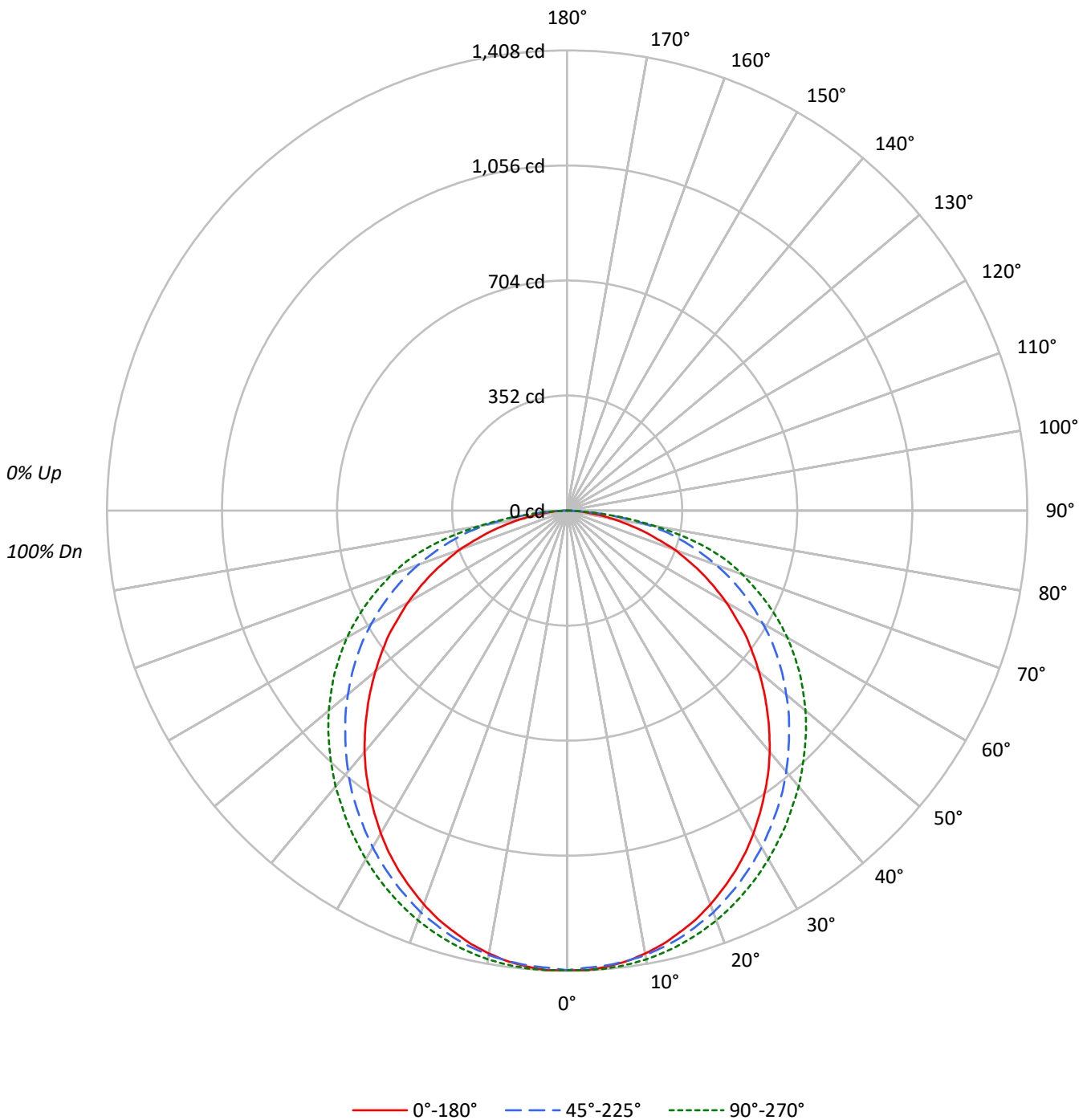
Lumens per Lamp: N/A
Luminaire Lumens: 4281.0 lumens
Efficiency: N/A
Efficacy: 122.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 34.9
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°	3784	3784	3784
5°	3784	3773	3799
10°	3760	3773	3810
15°	3719	3765	3816
20°	3672	3747	3821
25°	3613	3720	3822
30°	3543	3698	3828
35°	3462	3676	3842
40°	3387	3664	3873
45°	3295	3654	3914
50°	3207	3665	3985
55°	3132	3690	4075
60°	3026	3718	4189
65°	2905	3762	4316
70°	2755	3815	4488
75°	2467	3869	4636
80°	2077	3879	4207
85°	1541	2936	2766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.3	3.1
10°-20°	381.9	8.9
20°-30°	578.1	13.5
30°-40°	699.4	16.3
40°-50°	738.2	17.2
50°-60°	696.1	16.3
60°-70°	573.9	13.4
70°-80°	376.5	8.8
80°-90°	103.5	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°	1093.3	25.5
0°-40°	1792.6	41.9
0°-60°	3227.0	75.4
0°-90°	4281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1401	1401	1397	1406	1406	133
15°	1335	1342	1351	1367	1370	377
25°	1217	1232	1253	1279	1287	560
35°	1054	1081	1119	1157	1170	660
45°	866	905	960	1012	1029	668
55°	668	715	786	845	869	595
65°	456	511	591	654	678	450
75°	237	298	372	431	446	251
85°	50	86	95	92	90	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1406.2	1406.2	1406.2	1406.2	1406.2
2.5°	1407.5	1406.2	1400.0	1408.2	1407.5
5°	1400.7	1400.7	1396.6	1406.2	1406.2
7.5°	1391.1	1391.8	1390.4	1401.4	1401.4
10°	1376.1	1378.8	1380.8	1393.2	1394.5
12.5°	1358.3	1363.1	1367.2	1382.2	1383.6
15°	1335.0	1342.5	1351.4	1367.2	1369.9
17.5°	1311.1	1320.0	1329.6	1350.1	1353.5
20°	1282.4	1292.6	1308.4	1328.9	1334.3
22.5°	1250.2	1264.6	1281.0	1305.6	1312.5
25°	1216.7	1231.8	1253.0	1278.9	1287.2
27.5°	1180.5	1198.2	1222.2	1252.3	1261.2
30°	1140.1	1160.6	1190.0	1222.2	1231.8
32.5°	1097.7	1121.6	1154.5	1190.0	1201.0
35°	1053.9	1081.3	1118.9	1157.2	1169.5
37.5°	1010.8	1038.2	1082.7	1123.0	1134.6
40°	964.3	994.4	1043.0	1086.1	1102.5
42.5°	915.1	950.7	1002.0	1049.8	1065.6
45°	865.9	904.8	960.2	1011.5	1028.6
47.5°	815.9	859.0	919.9	971.9	991.7
50°	766.0	811.8	875.4	931.5	952.0
52.5°	715.4	763.3	832.3	891.8	910.3
55°	667.5	714.7	786.5	845.3	868.6
57.5°	612.1	665.5	741.4	800.9	823.4
60°	562.2	614.2	690.8	753.7	778.3
62.5°	508.2	561.5	642.2	705.1	729.1
65°	456.2	510.9	590.9	653.8	677.8
67.5°	400.1	457.5	539.6	600.5	623.7
70°	350.2	404.2	484.9	547.1	570.4
72.5°	289.3	350.9	428.1	489.7	515.0
75°	237.3	298.2	372.1	430.9	445.9
77.5°	182.6	243.5	316.7	355.0	365.2
80°	134.0	191.5	250.3	270.8	271.5
82.5°	90.3	140.9	174.4	184.7	183.3
85°	49.9	86.2	95.1	92.3	89.6
87.5°	20.5	28.7	23.3	16.4	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)