

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: P474714

Luminaire Tested: **24CZ2-45-SQR-UNV-L850-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474714
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-L850-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

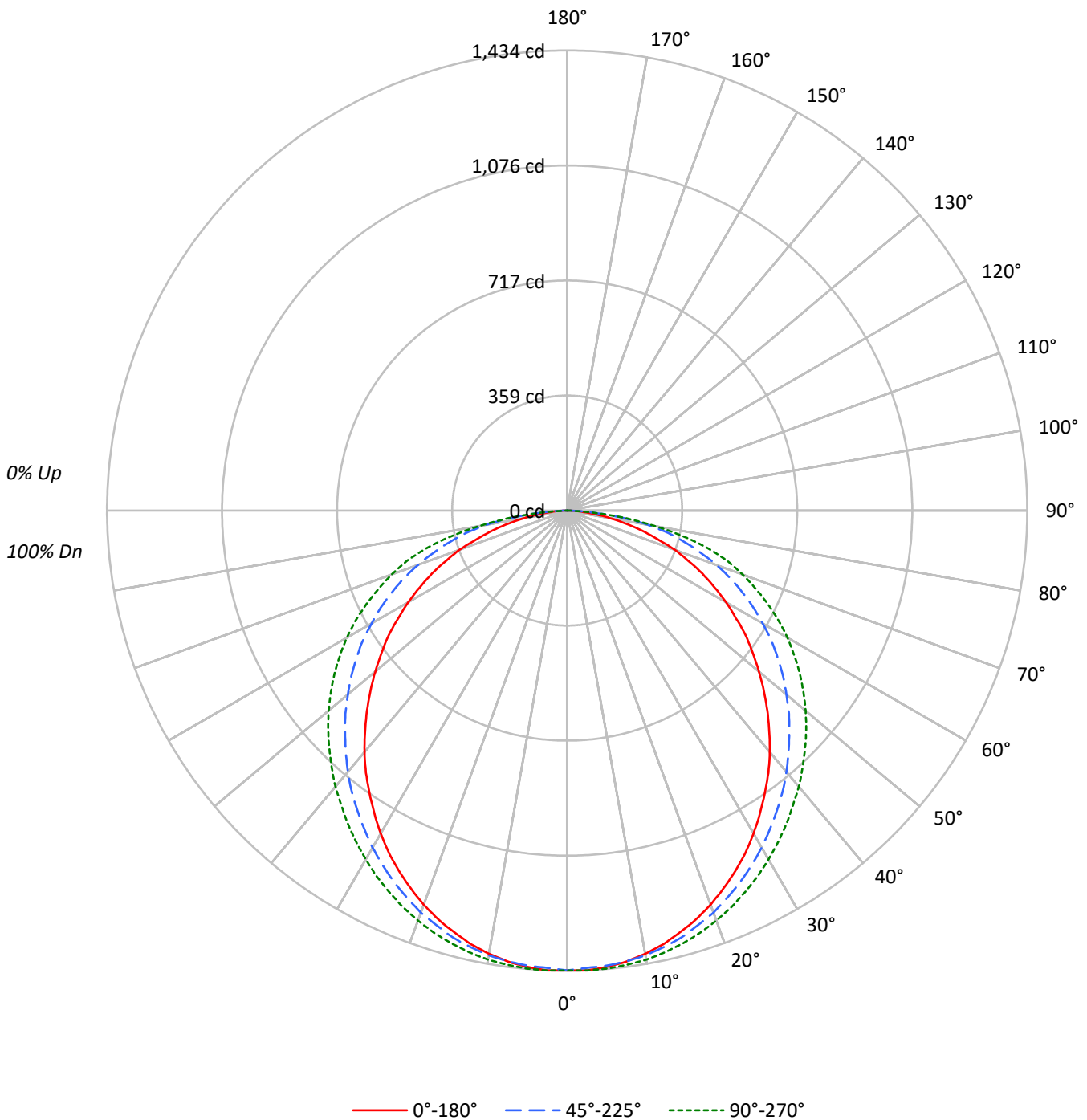
Lumens per Lamp: N/A
Luminaire Lumens: 4362.3 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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			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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82	82	
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68	68	
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56	56	
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48	48	
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41	41	
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36	36	
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31	31	
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28	28	
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23	23	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3856	3856	3856
5°	3856	3844	3871
10°	3831	3845	3883
15°	3790	3836	3889
20°	3742	3818	3894
25°	3681	3791	3894
30°	3610	3768	3900
35°	3528	3746	3915
40°	3452	3733	3946
45°	3358	3724	3989
50°	3268	3735	4061
55°	3191	3760	4153
60°	3083	3788	4268
65°	2960	3834	4397
70°	2807	3888	4573
75°	2514	3942	4724
80°	2117	3953	4288
85°	1572	2992	2819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.8	3.1
10°-20°	389.2	8.9
20°-30°	589.1	13.5
30°-40°	712.6	16.3
40°-50°	752.2	17.2
50°-60°	709.4	16.3
60°-70°	584.8	13.4
70°-80°	383.7	8.8
80°-90°	105.5	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°	1114.0	25.5
0°-40°	1826.7	41.9
0°-60°	3288.3	75.4
0°-90°	4362.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4362.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1433	1433	1433	1433	1433	
5°	1427	1427	1423	1433	1433	135
15°	1360	1368	1377	1393	1396	384
25°	1240	1255	1277	1303	1312	571
35°	1074	1102	1140	1179	1192	672
45°	882	922	978	1031	1048	681
55°	680	728	802	861	885	606
65°	465	521	602	666	691	459
75°	242	304	379	439	454	256
85°	51	88	97	94	91	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1432.9	1432.9	1432.9	1432.9	1432.9
2.5°	1434.3	1432.9	1426.6	1435.0	1434.3
5°	1427.3	1427.3	1423.1	1432.9	1432.9
7.5°	1417.5	1418.2	1416.8	1428.0	1428.0
10°	1402.2	1405.0	1407.1	1419.6	1421.0
12.5°	1384.1	1389.0	1393.1	1408.5	1409.9
15°	1360.4	1368.1	1377.1	1393.1	1395.9
17.5°	1336.0	1345.1	1354.8	1375.7	1379.2
20°	1306.7	1317.2	1333.2	1354.1	1359.7
22.5°	1274.0	1288.6	1305.3	1330.4	1337.4
25°	1239.8	1255.2	1276.8	1303.2	1311.6
27.5°	1202.9	1221.0	1245.4	1276.1	1285.1
30°	1161.8	1182.7	1212.6	1245.4	1255.2
32.5°	1118.6	1143.0	1176.4	1212.6	1223.8
35°	1074.0	1101.8	1140.2	1179.2	1191.7
37.5°	1030.1	1057.9	1103.2	1144.3	1156.2
40°	982.7	1013.3	1062.8	1106.7	1123.4
42.5°	932.5	968.7	1021.0	1069.8	1085.8
45°	882.3	922.0	978.5	1030.7	1048.2
47.5°	831.4	875.3	937.4	990.3	1010.5
50°	780.6	827.2	892.1	949.2	970.1
52.5°	729.0	777.8	848.2	908.8	927.6
55°	680.2	728.3	801.5	861.4	885.1
57.5°	623.7	678.1	755.5	816.1	839.1
60°	572.9	625.8	703.9	768.0	793.1
62.5°	517.8	572.2	654.4	718.5	742.9
65°	464.8	520.6	602.1	666.3	690.6
67.5°	407.7	466.2	549.9	611.9	635.6
70°	356.8	411.9	494.1	557.5	581.2
72.5°	294.8	357.5	436.3	499.0	524.8
75°	241.8	303.9	379.1	439.1	454.4
77.5°	186.1	248.1	322.7	361.7	372.2
80°	136.6	195.1	255.1	276.0	276.7
82.5°	92.0	143.6	177.7	188.2	186.8
85°	50.9	87.8	96.9	94.1	91.3
87.5°	20.9	29.3	23.7	16.7	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)