

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: P474722

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

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474722  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45HE-SQR-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4561.7 lumens  
Efficiency: N/A  
Efficacy: 129.2 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

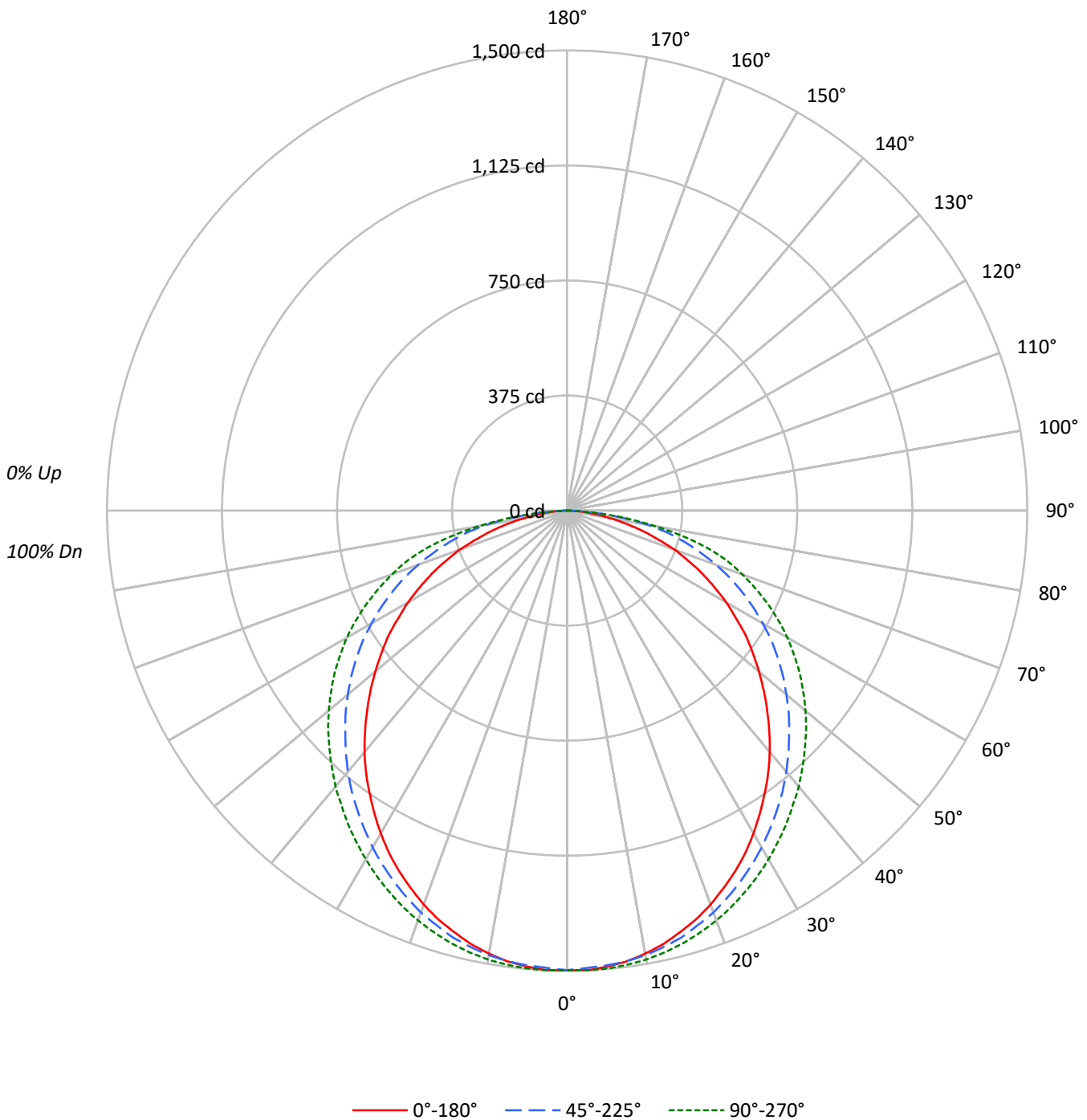
Input Watts (W): 35.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P474722

CATALOG NUMBER: 24CZ2-45HE-SQR-UNV-L850-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P474722

CATALOG NUMBER: 24CZ2-45HE-SQR-UNV-L850-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	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
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4032	4032	4032
5°	4032	4020	4048
10°	4007	4021	4060
15°	3963	4012	4067
20°	3913	3993	4072
25°	3850	3964	4073
30°	3775	3940	4078
35°	3689	3917	4094
40°	3610	3904	4127
45°	3511	3894	4171
50°	3417	3905	4247
55°	3337	3932	4343
60°	3224	3962	4464
65°	3095	4010	4599
70°	2936	4065	4782
75°	2629	4122	4941
80°	2213	4133	4483
85°	1643	3128	2949



TEST NUMBER: P474722

CATALOG NUMBER: 24CZ2-45HE-SQR-UNV-L850-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.0	3.1
10°-20°	406.9	8.9
20°-30°	616.0	13.5
30°-40°	745.2	16.3
40°-50°	786.6	17.2
50°-60°	741.8	16.3
60°-70°	611.6	13.4
70°-80°	401.2	8.8
80°-90°	110.3	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°	1165.0	25.5
0°-40°	1910.2	41.9
0°-60°	3438.6	75.4
0°-90°	4561.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4561.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1498	1498	1498	1498	1498	
5°	1492	1492	1488	1498	1498	142
15°	1423	1431	1440	1457	1460	401
25°	1296	1312	1335	1363	1372	597
35°	1123	1152	1192	1233	1246	703
45°	923	964	1023	1078	1096	712
55°	711	762	838	901	926	634
65°	486	544	630	697	722	480
75°	253	318	396	459	475	267
85°	53	92	101	98	96	66
90°	0	0	0	0	0	



TEST NUMBER: P474722

CATALOG NUMBER: 24CZ2-45HE-SQR-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1498.4	1498.4	1498.4	1498.4	1498.4
2.5°	1499.8	1498.4	1491.8	1500.6	1499.8
5°	1492.5	1492.5	1488.2	1498.4	1498.4
7.5°	1482.3	1483.1	1481.6	1493.3	1493.3
10°	1466.3	1469.2	1471.4	1484.5	1486.0
12.5°	1447.4	1452.5	1456.8	1472.9	1474.3
15°	1422.6	1430.6	1440.1	1456.8	1459.8
17.5°	1397.1	1406.6	1416.8	1438.6	1442.3
20°	1366.5	1377.4	1394.2	1416.0	1421.9
22.5°	1332.2	1347.5	1365.0	1391.2	1398.5
25°	1296.5	1312.5	1335.1	1362.8	1371.6
27.5°	1257.9	1276.8	1302.3	1334.4	1343.9
30°	1214.9	1236.7	1268.1	1302.3	1312.5
32.5°	1169.7	1195.2	1230.2	1268.1	1279.7
35°	1123.1	1152.2	1192.3	1233.1	1246.2
37.5°	1077.1	1106.3	1153.7	1196.7	1209.1
40°	1027.6	1059.7	1111.4	1157.3	1174.8
42.5°	975.1	1013.0	1067.7	1118.7	1135.4
45°	922.6	964.2	1023.2	1077.9	1096.1
47.5°	869.4	915.4	980.2	1035.6	1056.7
50°	816.2	865.1	932.8	992.6	1014.5
52.5°	762.3	813.3	886.9	950.3	970.0
55°	711.3	761.6	838.1	900.8	925.6
57.5°	652.3	709.1	790.0	853.4	877.5
60°	599.1	654.4	736.1	803.1	829.4
62.5°	541.5	598.3	684.3	751.4	776.9
65°	486.1	544.4	629.7	696.7	722.2
67.5°	426.3	487.6	575.0	639.9	664.6
70°	373.1	430.7	516.7	583.0	607.8
72.5°	308.3	373.9	456.2	521.8	548.8
75°	252.9	317.7	396.5	459.1	475.2
77.5°	194.6	259.4	337.4	378.2	389.2
80°	142.8	204.1	266.7	288.6	289.3
82.5°	96.2	150.1	185.8	196.8	195.3
85°	53.2	91.8	101.3	98.4	95.5
87.5°	21.9	30.6	24.8	17.5	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)