

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: P473970

Luminaire Tested: **24CZ2-35HE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473970
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35HE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

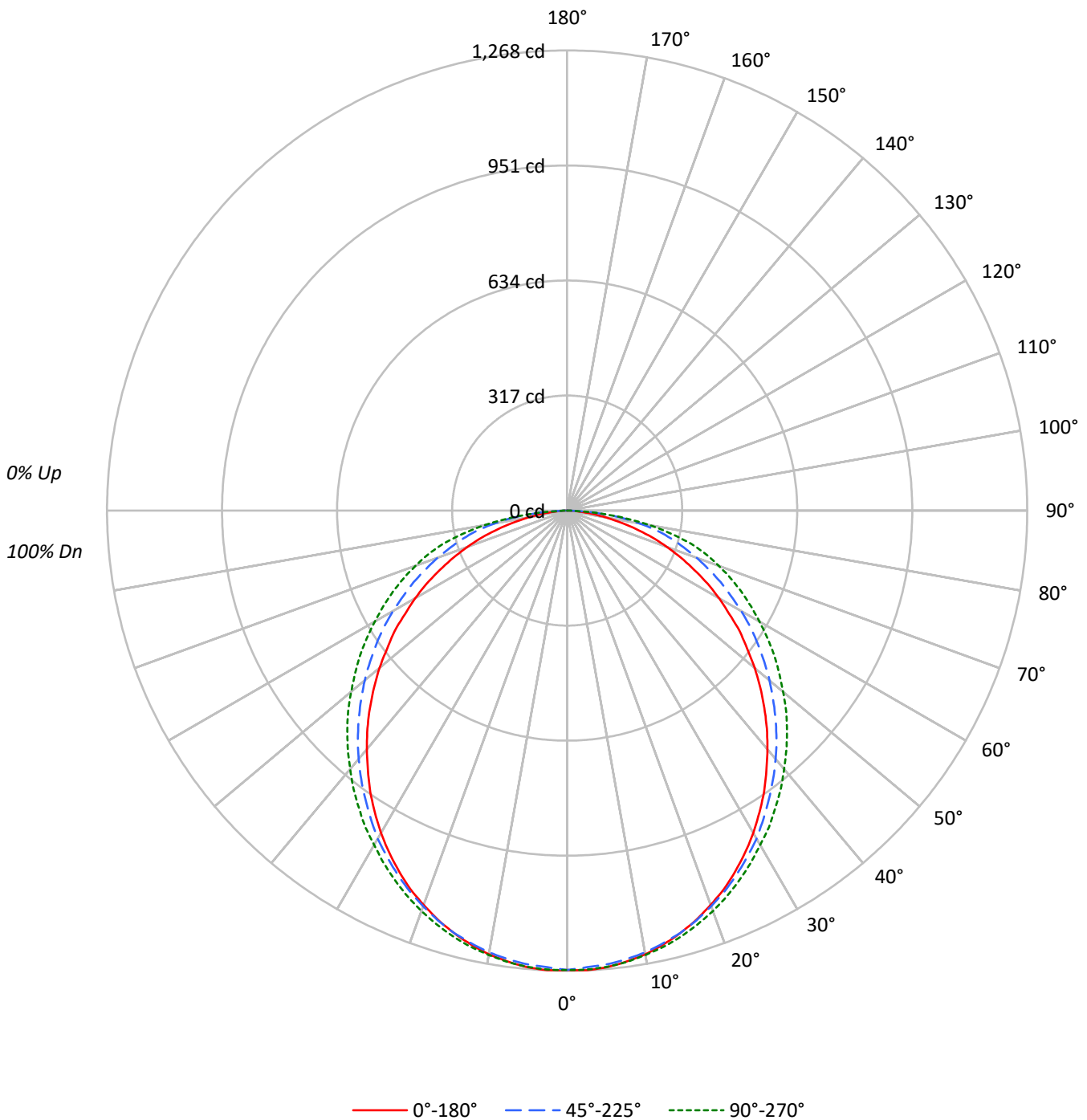
Lumens per Lamp: N/A
Luminaire Lumens: 3627.2 lumens
Efficiency: N/A
Efficacy: 134.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 27
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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1703	1703	1703
5°	1706	1695	1704
10°	1696	1689	1699
15°	1679	1678	1692
20°	1656	1661	1681
25°	1628	1643	1668
30°	1594	1622	1652
35°	1554	1593	1643
40°	1508	1570	1633
45°	1462	1545	1630
50°	1413	1524	1626
55°	1363	1505	1635
60°	1300	1491	1647
65°	1231	1485	1686
70°	1148	1493	1746
75°	1022	1536	1840
80°	835	1570	1796
85°	588	1371	1399



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.7	3.3
10°-20°	340.9	9.4
20°-30°	511.0	14.1
30°-40°	608.6	16.8
40°-50°	627.5	17.3
50°-60°	572.6	15.8
60°-70°	457.9	12.6
70°-80°	299.1	8.2
80°-90°	89.8	2.5
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°	971.6	26.8
0°-40°	1580.2	43.6
0°-60°	2780.4	76.7
0°-90°	3627.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3627.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1266	1266	1266	1266	1266	
5°	1263	1261	1255	1263	1262	120
15°	1205	1206	1205	1215	1215	340
25°	1097	1099	1106	1122	1124	505
35°	946	953	970	994	1000	591
45°	769	782	812	846	857	593
55°	581	598	642	684	697	517
65°	387	413	466	512	530	383
75°	197	229	296	343	354	209
85°	38	68	89	91	91	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1266.0	1266.0	1266.0	1266.0	1266.0
2.5°	1267.8	1266.0	1259.5	1267.2	1266.0
5°	1263.1	1260.7	1255.3	1263.1	1261.9
7.5°	1253.5	1252.3	1247.0	1255.9	1254.7
10°	1241.6	1240.4	1236.3	1245.2	1243.4
12.5°	1224.9	1224.3	1221.4	1232.1	1230.9
15°	1205.3	1205.9	1204.7	1214.8	1214.8
17.5°	1182.6	1182.0	1184.4	1196.9	1195.7
20°	1156.4	1157.0	1160.0	1174.3	1174.3
22.5°	1129.0	1128.4	1135.0	1149.3	1150.5
25°	1096.8	1098.6	1106.4	1122.5	1123.7
27.5°	1062.3	1065.3	1074.8	1093.3	1095.1
30°	1025.9	1029.5	1043.8	1061.1	1063.5
32.5°	986.0	993.8	1006.9	1028.9	1034.9
35°	946.1	952.7	969.9	994.4	1000.3
37.5°	902.0	912.7	932.4	959.2	967.0
40°	858.5	869.3	893.7	921.7	930.0
42.5°	814.4	825.8	853.8	885.3	894.3
45°	768.6	782.3	812.1	846.0	856.7
47.5°	721.5	737.6	769.8	806.7	818.6
50°	675.0	691.1	728.1	766.2	776.9
52.5°	625.0	645.2	684.6	725.7	736.4
55°	580.9	597.6	641.7	684.0	697.1
57.5°	529.1	551.7	598.8	641.7	654.2
60°	483.2	504.0	554.1	597.6	611.9
62.5°	436.7	458.2	508.2	557.7	570.8
65°	386.7	412.9	466.5	512.4	529.7
67.5°	339.0	366.4	421.2	470.1	487.9
70°	291.9	319.9	379.5	429.6	443.9
72.5°	245.5	274.7	336.6	385.5	402.2
75°	196.6	229.4	295.5	343.2	353.9
77.5°	150.7	187.1	253.8	286.0	293.7
80°	107.8	147.8	202.6	225.8	231.8
82.5°	70.9	109.6	151.3	163.8	162.1
85°	38.1	68.5	88.8	90.6	90.6
87.5°	14.9	27.4	28.0	21.4	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)