

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: P473983

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

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473983  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35VHE-S-UNV-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

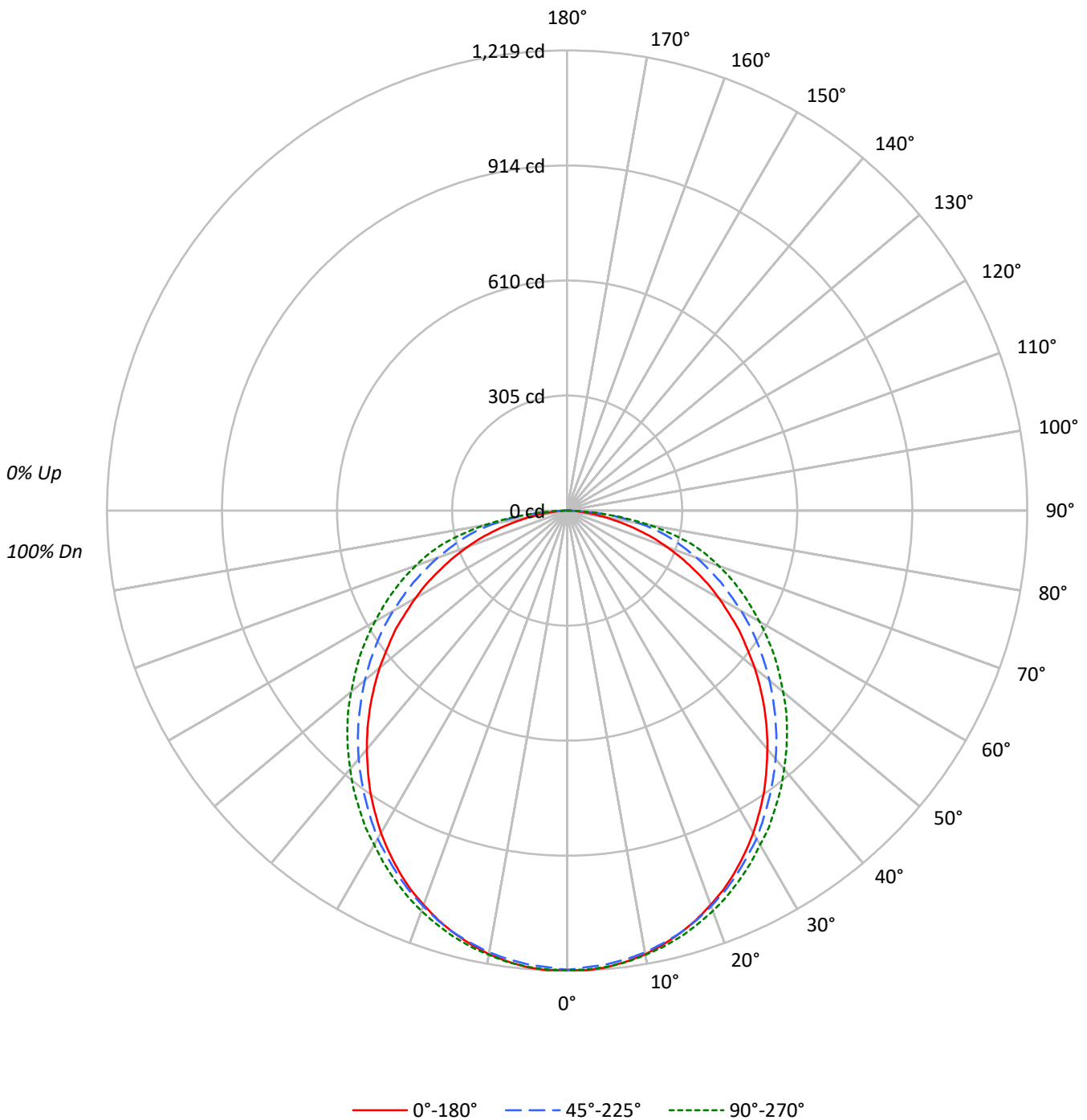
Lumens per Lamp: N/A  
Luminaire Lumens: 3486.4 lumens  
Efficiency: N/A  
Efficacy: 145.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.9  
Input Voltage (V): 120  
Input Current (Ain): 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
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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25

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

	0°	45°	90°
0°	1637	1637	1637
5°	1640	1630	1638
10°	1630	1624	1633
15°	1614	1613	1627
20°	1591	1597	1616
25°	1565	1579	1603
30°	1532	1559	1588
35°	1494	1531	1579
40°	1449	1509	1570
45°	1406	1485	1567
50°	1358	1465	1563
55°	1310	1447	1572
60°	1250	1433	1583
65°	1183	1428	1621
70°	1104	1435	1678
75°	983	1476	1769
80°	804	1509	1726
85°	567	1317	1343



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.0	3.3
10°-20°	327.7	9.4
20°-30°	491.2	14.1
30°-40°	585.0	16.8
40°-50°	603.2	17.3
50°-60°	550.4	15.8
60°-70°	440.1	12.6
70°-80°	287.5	8.2
80°-90°	86.3	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°	933.9	26.8
0°-40°	1518.9	43.6
0°-60°	2672.5	76.7
0°-90°	3486.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3486.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1214	1212	1207	1214	1213	115
15°	1158	1159	1158	1168	1168	327
25°	1054	1056	1063	1079	1080	485
35°	909	916	932	956	962	568
45°	739	752	780	813	824	570
55°	558	574	617	657	670	497
65°	372	397	448	492	509	369
75°	189	220	284	330	340	201
85°	37	66	85	87	87	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1218.6	1216.9	1210.6	1218.1	1216.9
5°	1214.1	1211.8	1206.6	1214.1	1212.9
7.5°	1204.9	1203.7	1198.6	1207.2	1206.0
10°	1193.4	1192.3	1188.3	1196.9	1195.2
12.5°	1177.4	1176.8	1174.0	1184.3	1183.1
15°	1158.5	1159.1	1157.9	1167.7	1167.7
17.5°	1136.7	1136.2	1138.5	1150.5	1149.3
20°	1111.5	1112.1	1115.0	1128.7	1128.7
22.5°	1085.2	1084.6	1090.9	1104.7	1105.8
25°	1054.3	1056.0	1063.4	1078.9	1080.0
27.5°	1021.1	1023.9	1033.1	1050.8	1052.6
30°	986.1	989.6	1003.3	1019.9	1022.2
32.5°	947.8	955.2	967.8	989.0	994.7
35°	909.4	915.7	932.3	955.8	961.5
37.5°	867.0	877.3	896.2	922.0	929.4
40°	825.2	835.5	859.0	885.9	893.9
42.5°	782.8	793.7	820.6	851.0	859.6
45°	738.7	751.9	780.5	813.2	823.5
47.5°	693.5	709.0	739.9	775.4	786.8
50°	648.8	664.3	699.8	736.4	746.8
52.5°	600.7	620.2	658.0	697.5	707.8
55°	558.3	574.4	616.8	657.4	670.0
57.5°	508.5	530.3	575.5	616.8	628.8
60°	464.4	484.5	532.6	574.4	588.1
62.5°	419.8	440.4	488.5	536.0	548.6
65°	371.7	396.9	448.4	492.5	509.1
67.5°	325.8	352.2	404.9	451.8	469.0
70°	280.6	307.5	364.8	412.9	426.6
72.5°	235.9	264.0	323.6	370.5	386.5
75°	189.0	220.5	284.0	329.9	340.2
77.5°	144.9	179.8	244.0	274.9	282.3
80°	103.7	142.0	194.7	217.0	222.8
82.5°	68.1	105.4	145.5	157.5	155.8
85°	36.7	65.9	85.3	87.0	87.0
87.5°	14.3	26.3	26.9	20.6	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)