

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: P475156

Luminaire Tested: **22CZ2-60VHE-HRP-UNV-L835-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475156  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-60VHE-HRP-UNV-L835-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4893.4 lumens  
Efficiency: N/A  
Efficacy: 116.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

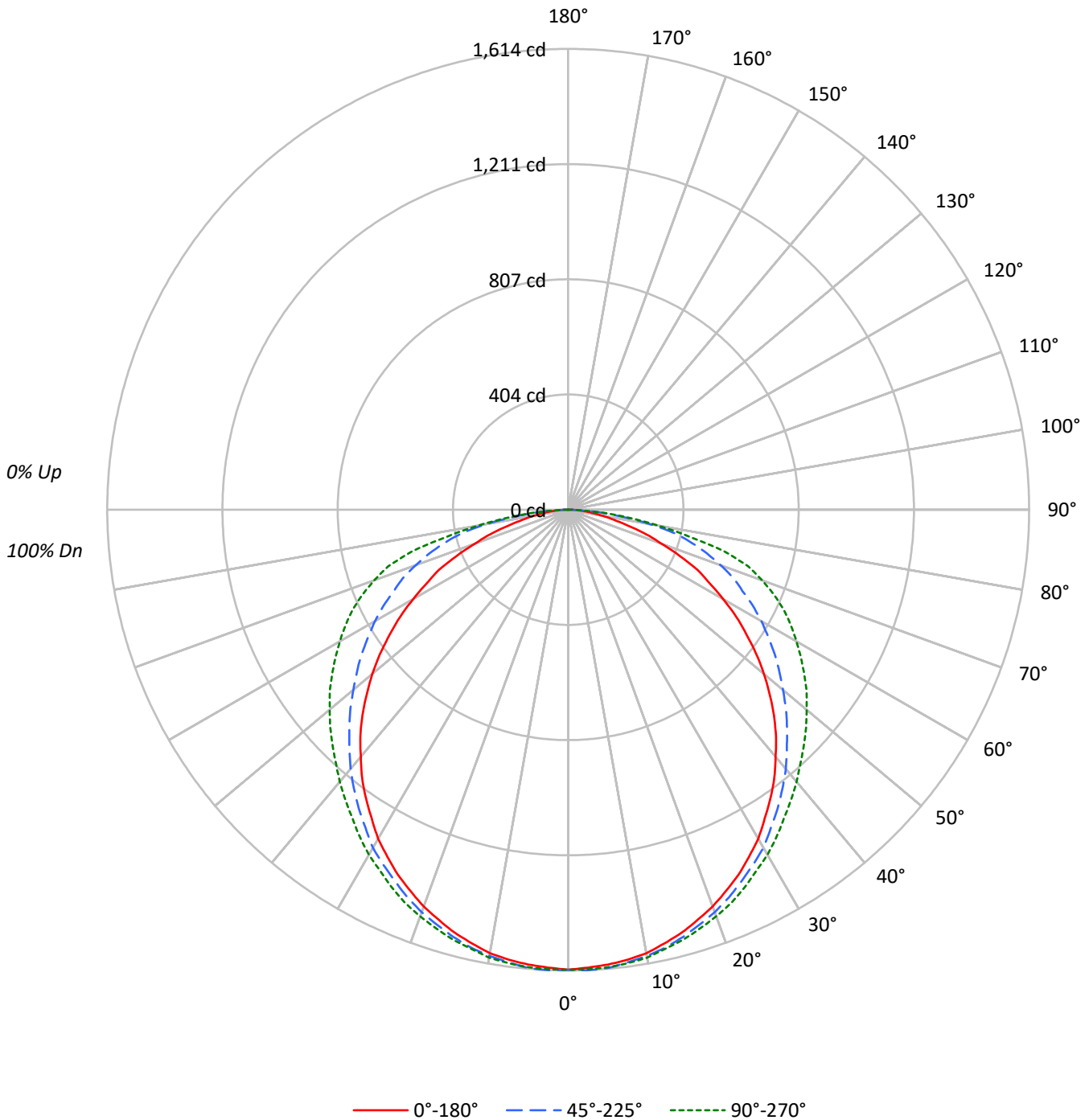
Input Watts (W): 42.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	80	75	84	78	73		80	75	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	52	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°	4336	4336	4336
5°	4319	4352	4344
10°	4310	4336	4353
15°	4274	4317	4343
20°	4235	4296	4340
25°	4189	4262	4336
30°	4134	4249	4336
35°	4056	4198	4330
40°	3968	4164	4370
45°	3877	4124	4440
50°	3748	4109	4562
55°	3577	4142	4736
60°	3372	4203	4968
65°	3184	4285	5308
70°	2721	4469	5683
75°	2279	4655	5906
80°	1867	4496	4926
85°	1615	3335	3619



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.7	3.1
10°-20°	436.8	8.9
20°-30°	662.1	13.5
30°-40°	799.4	16.3
40°-50°	840.0	17.2
50°-60°	790.3	16.2
60°-70°	659.0	13.5
70°-80°	436.7	8.9
80°-90°	116.4	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°	1251.6	25.6
0°-40°	2051.0	41.9
0°-60°	3681.4	75.2
0°-90°	4893.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4893.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1611	1611	1611	1611	1611	
5°	1599	1602	1611	1611	1608	152
15°	1534	1540	1550	1556	1559	433
25°	1411	1420	1435	1454	1460	650
35°	1235	1247	1278	1306	1318	772
45°	1019	1034	1084	1139	1167	785
55°	762	796	883	972	1009	682
65°	500	543	673	784	834	487
75°	219	306	448	540	568	238
85°	52	80	108	117	117	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1611.2	1611.2	1611.2	1611.2	1611.2
2.5°	1605.2	1608.2	1614.5	1614.5	1611.2
5°	1599.0	1602.0	1611.2	1611.2	1608.2
7.5°	1589.7	1593.0	1599.0	1605.2	1602.0
10°	1577.4	1580.4	1586.7	1593.0	1593.0
12.5°	1555.9	1558.9	1571.2	1574.4	1574.4
15°	1534.1	1540.3	1549.6	1555.9	1558.9
17.5°	1506.5	1512.5	1524.8	1537.4	1537.4
20°	1478.7	1484.7	1500.3	1512.5	1515.5
22.5°	1444.6	1453.9	1469.5	1484.7	1491.0
25°	1410.8	1420.1	1435.4	1453.9	1460.2
27.5°	1370.5	1379.7	1401.6	1423.1	1426.1
30°	1330.4	1339.7	1367.5	1386.0	1395.3
32.5°	1281.0	1293.3	1321.1	1348.9	1358.2
35°	1234.7	1247.2	1278.0	1305.9	1318.1
37.5°	1185.3	1197.6	1231.7	1265.8	1281.0
40°	1129.7	1145.2	1185.3	1222.4	1243.9
42.5°	1077.3	1092.9	1133.0	1182.3	1203.9
45°	1018.7	1034.0	1083.6	1139.0	1166.8
47.5°	956.8	975.4	1034.0	1102.2	1129.7
50°	895.2	916.7	981.6	1058.8	1089.6
52.5°	830.3	858.1	932.3	1015.7	1052.5
55°	762.4	796.5	882.9	972.4	1009.4
57.5°	697.5	728.6	830.3	926.0	966.1
60°	626.6	666.7	780.9	879.6	923.0
62.5°	558.7	602.1	728.6	833.6	879.6
65°	500.1	543.2	673.0	783.9	833.6
67.5°	422.9	481.5	626.6	731.6	780.9
70°	345.8	425.9	568.0	676.0	722.3
72.5°	287.1	364.3	509.4	617.3	660.7
75°	219.2	305.7	447.7	540.2	568.0
77.5°	163.6	253.0	382.8	429.2	432.2
80°	120.5	194.4	290.1	305.7	317.9
82.5°	83.4	135.8	188.4	206.7	213.0
85°	52.3	80.2	108.0	117.2	117.2
87.5°	27.8	30.8	37.1	37.1	37.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)