

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: P475467

Luminaire Tested: **14CZ2-20-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475467  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-20-HRP-UNV-L840-CD1-U  
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1697.7 lumens  
Efficiency: N/A  
Efficacy: 108.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

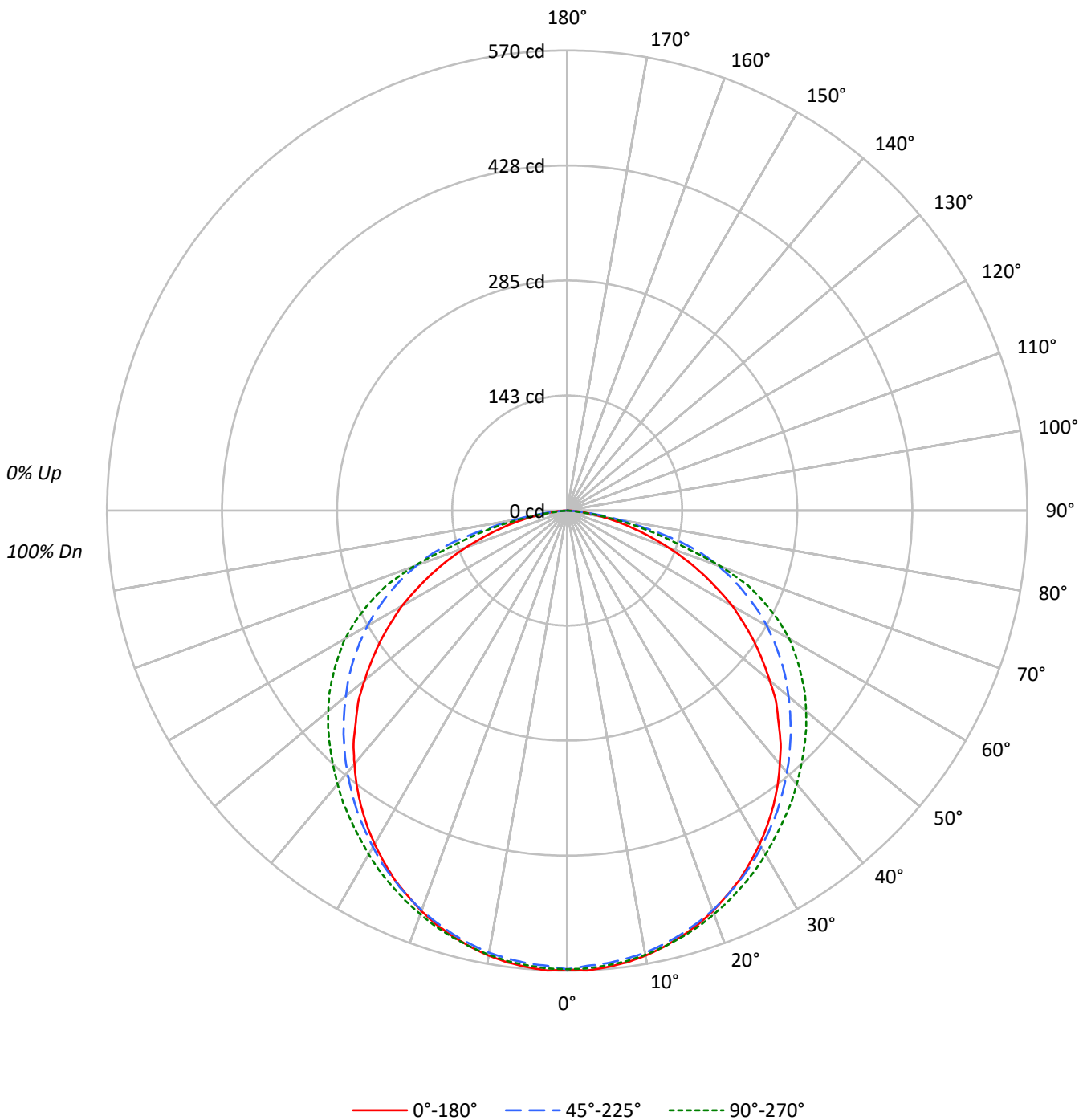
Input Watts (W): 15.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P475467

CATALOG NUMBER: 14CZ2-20-HRP-UNV-L840-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P475467

CATALOG NUMBER: 14CZ2-20-HRP-UNV-L840-CD1-U

**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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	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	39	51	44	39	50	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	41	33	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	1529	1529	1529
5°	1534	1521	1528
10°	1530	1520	1527
15°	1522	1514	1524
20°	1512	1509	1523
25°	1499	1502	1524
30°	1482	1495	1528
35°	1464	1491	1536
40°	1440	1488	1554
45°	1408	1490	1580
50°	1371	1499	1617
55°	1325	1517	1660
60°	1272	1538	1710
65°	1175	1552	1719
70°	1047	1559	1592
75°	878	1444	1237
80°	666	1015	812
85°	469	355	114



TEST NUMBER: P475467

CATALOG NUMBER: 14CZ2-20-HRP-UNV-L840-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.8	3.2
10°-20°	154.1	9.1
20°-30°	234.2	13.8
30°-40°	285.2	16.8
40°-50°	303.0	17.8
50°-60°	286.6	16.9
60°-70°	232.2	13.7
70°-80°	127.3	7.5
80°-90°	21.3	1.3
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°	442.1	26.0
0°-40°	727.3	42.8
0°-60°	1316.9	77.6
0°-90°	1697.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1697.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	568	568	568	568	568	
5°	568	567	563	567	566	54
15°	546	545	544	548	547	154
25°	505	505	506	513	513	232
35°	446	447	454	465	468	279
45°	370	376	392	409	415	286
55°	282	295	323	347	354	252
65°	184	206	244	265	270	182
75°	84	116	139	123	119	90
85°	15	20	12	6	4	19
90°	0	0	0	0	0	



TEST NUMBER: P475467

CATALOG NUMBER: 14CZ2-20-HRP-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	568.2	568.2	568.2	568.2	568.2
2.5°	570.3	568.2	564.5	568.2	567.7
5°	567.7	566.6	563.0	566.6	565.6
7.5°	564.5	563.5	559.8	564.0	563.0
10°	559.8	558.8	556.2	559.8	558.8
12.5°	553.5	553.0	550.4	554.6	553.5
15°	546.2	545.1	543.6	547.8	547.2
17.5°	537.8	536.8	535.7	541.0	540.4
20°	527.9	527.3	526.8	532.6	532.0
22.5°	516.3	516.3	516.8	523.1	523.1
25°	504.8	504.8	505.8	512.7	513.2
27.5°	491.2	492.2	494.3	501.6	503.2
30°	477.0	478.1	481.2	489.6	491.7
32.5°	461.8	463.4	467.6	477.5	479.6
35°	445.6	447.1	453.9	464.9	467.6
37.5°	428.3	430.9	438.7	451.3	456.0
40°	409.9	414.1	423.5	437.2	442.4
42.5°	391.6	395.2	407.8	423.5	428.8
45°	370.1	375.8	391.6	409.4	415.2
47.5°	351.2	356.4	374.8	394.7	401.5
50°	327.6	335.5	358.0	380.0	386.3
52.5°	305.1	315.6	341.2	363.8	371.1
55°	282.5	295.1	323.4	347.0	353.8
57.5°	258.9	272.6	304.6	328.7	336.0
60°	236.4	251.1	285.7	310.3	317.7
62.5°	209.7	228.0	265.2	288.8	295.1
65°	184.5	205.5	243.7	265.2	270.0
67.5°	158.8	183.5	221.7	240.6	242.2
70°	133.1	160.9	198.1	209.7	202.3
72.5°	108.0	138.9	173.0	163.5	155.2
75°	84.4	116.4	138.9	122.7	119.0
77.5°	62.4	95.4	97.0	89.1	86.5
80°	43.0	73.9	65.5	56.6	52.4
82.5°	27.8	45.6	36.2	26.7	24.1
85°	15.2	19.9	11.5	5.8	3.7
87.5°	5.8	3.7	1.6	1.6	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)