

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: P271967

Luminaire Tested: **22CZ2-20HE-UNV-L940-CD1-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P271967  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20HE-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (112) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1746.0 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

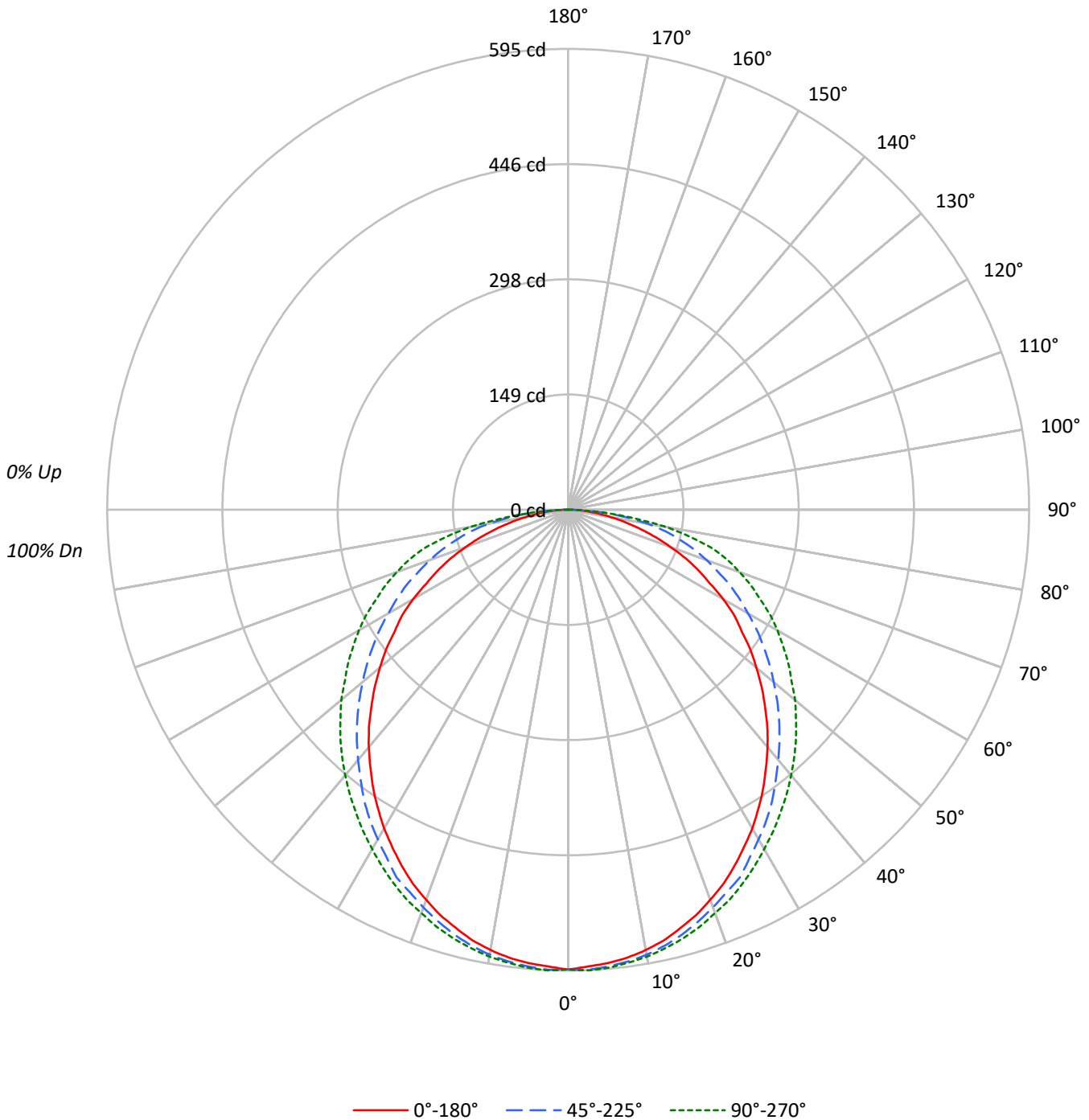
Input Watts (W): 16  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	1598	1598	1598
5°	1588	1599	1604
10°	1577	1594	1601
15°	1558	1582	1597
20°	1535	1565	1587
25°	1508	1556	1582
30°	1476	1527	1572
35°	1442	1507	1569
40°	1407	1482	1572
45°	1367	1465	1582
50°	1327	1449	1600
55°	1282	1443	1628
60°	1244	1443	1679
65°	1182	1466	1740
70°	1102	1494	1852
75°	1010	1545	2000
80°	879	1612	1971
85°	769	1433	1565



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.1	3.2
10°-20°	159.9	9.2
20°-30°	240.1	13.7
30°-40°	286.9	16.4
40°-50°	298.3	17.1
50°-60°	276.5	15.8
60°-70°	226.8	13.0
70°-80°	153.3	8.8
80°-90°	48.2	2.8
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°	456.1	26.1
0°-40°	743.0	42.6
0°-60°	1317.7	75.5
0°-90°	1746.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1746.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	588	588	592	593	594	56
15°	559	562	568	571	573	158
25°	508	512	524	530	533	234
35°	439	445	459	472	478	274
45°	359	366	385	407	416	277
55°	273	282	308	335	347	246
65°	186	196	230	260	273	183
75°	97	113	149	179	192	103
85°	25	34	46	52	51	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	593.7	593.7	593.7	593.7	593.7
2.5°	590.2	592.0	594.5	595.4	595.4
5°	587.7	588.5	592.0	592.8	593.7
7.5°	583.4	585.1	588.5	589.4	590.2
10°	577.3	579.1	583.4	585.1	585.9
12.5°	569.6	571.3	576.5	579.1	579.9
15°	559.3	561.9	567.9	571.3	573.1
17.5°	549.0	551.6	557.6	562.7	564.5
20°	536.1	542.1	546.4	553.3	554.2
22.5°	523.2	526.7	534.4	541.3	544.7
25°	507.8	512.1	524.1	530.1	532.7
27.5°	491.4	497.4	506.9	516.3	519.8
30°	475.1	479.4	491.4	502.6	506.0
32.5°	457.1	463.1	476.0	487.1	492.3
35°	439.0	445.0	458.8	472.5	477.7
37.5°	419.3	426.1	439.9	456.2	463.1
40°	400.4	405.5	421.8	441.6	447.6
42.5°	380.6	386.6	403.8	425.3	432.2
45°	359.1	366.0	384.9	407.2	415.8
47.5°	338.5	345.4	366.0	388.3	398.6
50°	317.0	325.6	346.2	372.0	382.3
52.5°	296.4	304.1	327.3	354.0	363.4
55°	273.2	281.8	307.6	335.1	347.1
57.5°	254.3	260.3	288.7	317.0	329.1
60°	231.1	238.8	268.1	298.1	311.9
62.5°	206.2	219.1	249.2	280.1	293.8
65°	185.6	195.9	230.3	260.3	273.2
67.5°	164.1	175.3	208.8	240.6	255.2
70°	140.0	154.6	189.9	221.7	235.4
72.5°	118.6	134.0	170.1	201.0	215.6
75°	97.1	113.4	148.6	178.7	192.4
77.5°	76.5	94.5	128.9	152.1	160.7
80°	56.7	73.9	104.0	120.3	127.2
82.5°	39.5	54.1	76.5	85.1	86.8
85°	24.9	34.4	46.4	51.5	50.7
87.5°	11.2	13.7	17.2	18.9	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)