

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: P294827

Luminaire Tested: **22CZ2-20-HRP-UNV-L930-CD1-U**

Issue Date: 12/2/2019

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: P294827  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20-HRP-UNV-L930-CD1-U  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (56) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

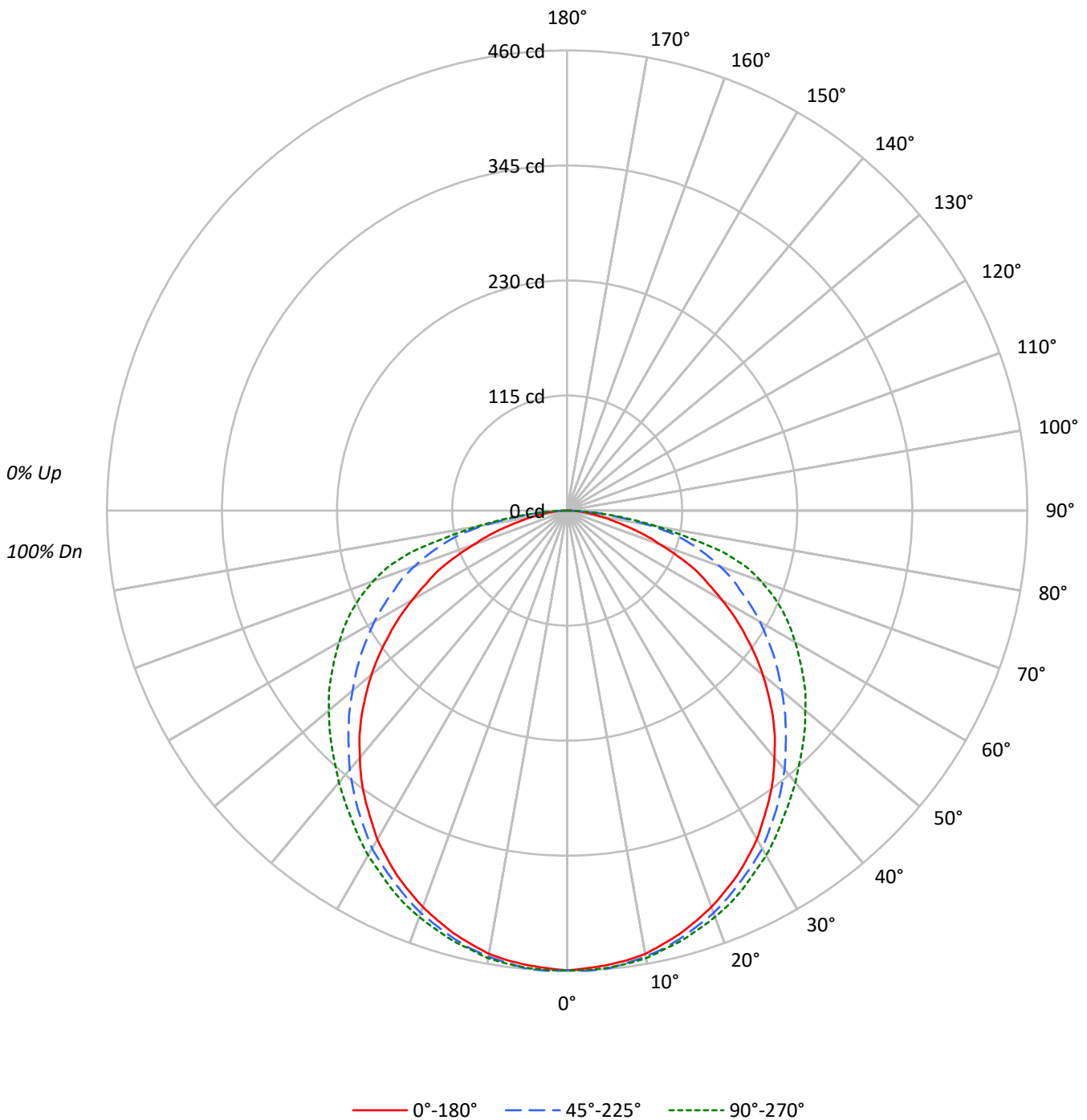
Lumens per Lamp: N/A  
Luminaire Lumens: 1395.9 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 17.9  
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



TEST NUMBER: P294827  
CATALOG NUMBER: 22CZ2-20-HRP-UNV-L930-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P294827

CATALOG NUMBER: 22CZ2-20-HRP-UNV-L930-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	50	30	10
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	83	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°	1237	1237	1237
5°	1232	1242	1239
10°	1230	1237	1242
15°	1219	1231	1239
20°	1208	1226	1238
25°	1195	1216	1237
30°	1179	1212	1237
35°	1157	1198	1235
40°	1132	1188	1247
45°	1106	1176	1267
50°	1069	1172	1301
55°	1020	1181	1351
60°	962	1199	1417
65°	909	1223	1514
70°	776	1275	1622
75°	650	1328	1684
80°	532	1283	1406
85°	463	951	1034



TEST NUMBER: P294827

CATALOG NUMBER: 22CZ2-20-HRP-UNV-L930-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.6	3.1
10°-20°	124.6	8.9
20°-30°	188.9	13.5
30°-40°	228.0	16.3
40°-50°	239.6	17.2
50°-60°	225.5	16.2
60°-70°	188.0	13.5
70°-80°	124.6	8.9
80°-90°	33.2	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°	357.0	25.6
0°-40°	585.1	41.9
0°-60°	1050.2	75.2
0°-90°	1395.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1395.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	456	457	460	460	459	43
15°	438	439	442	444	445	123
25°	402	405	410	415	416	185
35°	352	356	365	372	376	220
45°	291	295	309	325	333	224
55°	218	227	252	277	288	195
65°	143	155	192	224	238	139
75°	62	87	128	154	162	68
85°	15	23	31	34	34	17
90°	0	0	0	0	0	



TEST NUMBER: P294827

CATALOG NUMBER: 22CZ2-20-HRP-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	459.7	459.7	459.7	459.7	459.7
2.5°	457.9	458.8	460.5	460.5	459.7
5°	456.1	457.0	459.7	459.7	458.8
7.5°	453.5	454.4	456.1	457.9	457.0
10°	450.0	450.8	452.6	454.4	454.4
12.5°	443.8	444.7	448.2	449.1	449.1
15°	437.6	439.4	442.0	443.8	444.7
17.5°	429.7	431.5	435.0	438.5	438.5
20°	421.8	423.5	428.0	431.5	432.4
22.5°	412.1	414.7	419.1	423.5	425.3
25°	402.4	405.1	409.5	414.7	416.5
27.5°	391.0	393.6	399.8	405.9	406.8
30°	379.5	382.2	390.1	395.4	398.0
32.5°	365.4	369.0	376.9	384.8	387.4
35°	352.2	355.7	364.6	372.5	376.0
37.5°	338.1	341.7	351.3	361.0	365.4
40°	322.3	326.7	338.1	348.7	354.9
42.5°	307.3	311.7	323.2	337.3	343.4
45°	290.6	295.0	309.1	324.9	332.9
47.5°	273.0	278.3	295.0	314.4	322.3
50°	255.4	261.5	280.0	302.0	310.8
52.5°	236.9	244.8	265.9	289.7	300.3
55°	217.5	227.2	251.8	277.4	287.9
57.5°	199.0	207.8	236.9	264.2	275.6
60°	178.8	190.2	222.8	251.0	263.3
62.5°	159.4	171.7	207.8	237.8	251.0
65°	142.7	155.0	192.0	223.7	237.8
67.5°	120.6	137.4	178.8	208.7	222.8
70°	98.6	121.5	162.0	192.8	206.1
72.5°	81.9	103.9	145.3	176.1	188.4
75°	62.5	87.2	127.7	154.1	162.0
77.5°	46.7	72.2	109.2	122.4	123.3
80°	34.3	55.5	82.8	87.2	90.7
82.5°	23.8	38.7	53.7	59.0	60.8
85°	15.0	22.9	30.8	33.5	33.5
87.5°	7.9	8.8	10.6	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)