

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: P295012

Luminaire Tested: **24CZ2-30HE-HRP-UNV-L935-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: P295012  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-30HE-HRP-UNV-L935-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (168) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1979.2 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

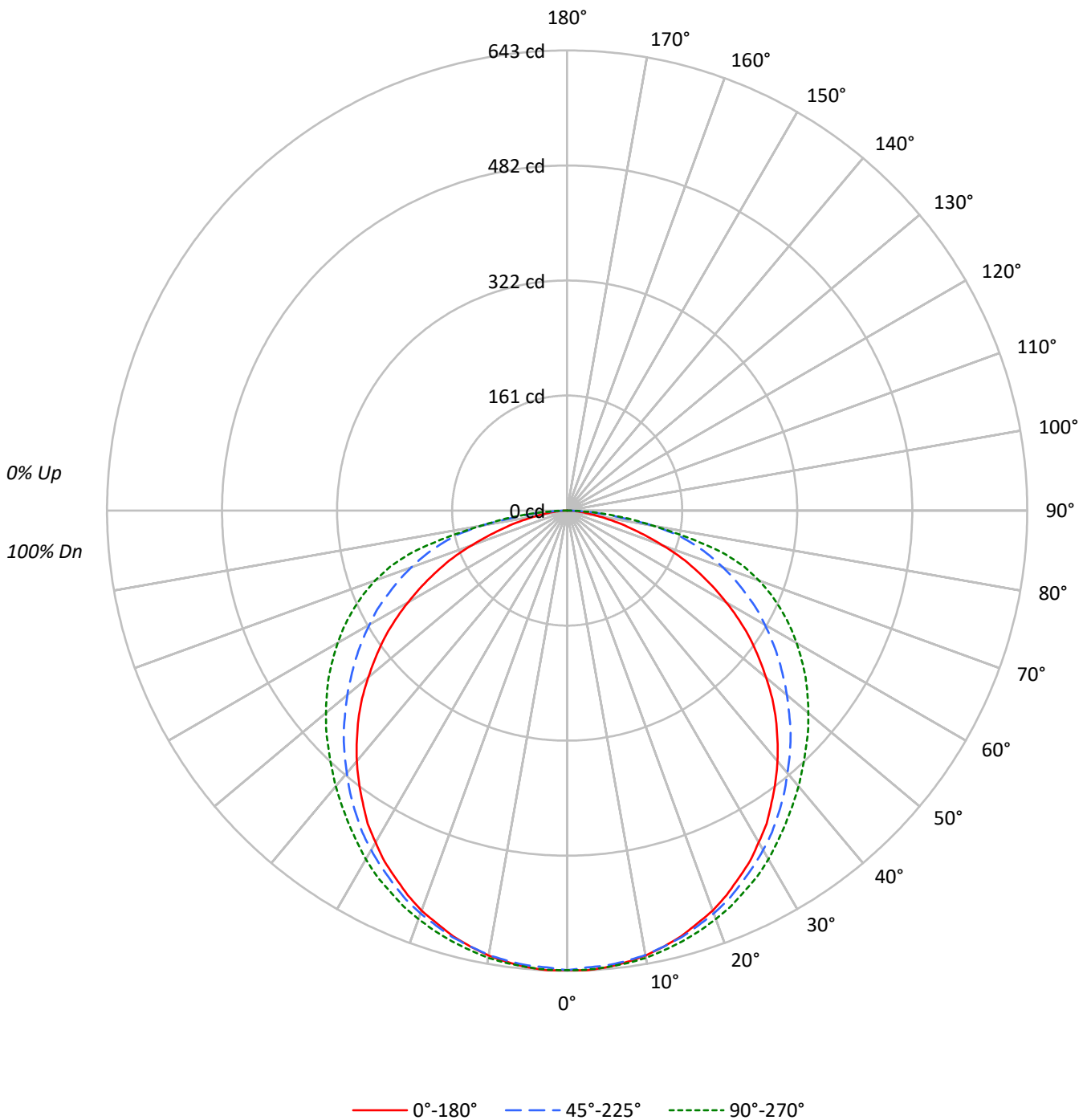
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P295012

CATALOG NUMBER: 24CZ2-30HE-HRP-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P295012

CATALOG NUMBER: 24CZ2-30HE-HRP-UNV-L935-CD1-U

**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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24

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

	0°	45°	90°
0°	864	864	864
5°	865	862	865
10°	863	862	867
15°	858	860	868
20°	852	858	870
25°	841	854	871
30°	832	851	874
35°	818	847	875
40°	803	841	883
45°	785	840	897
50°	760	839	921
55°	733	845	954
60°	691	858	997
65°	638	878	1053
70°	557	910	1121
75°	452	957	1159
80°	334	938	938
85°	256	690	780



TEST NUMBER: P295012

CATALOG NUMBER: 24CZ2-30HE-HRP-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.8	3.1
10°-20°	174.7	8.8
20°-30°	266.0	13.4
30°-40°	322.9	16.3
40°-50°	341.2	17.2
50°-60°	321.9	16.3
60°-70°	267.7	13.5
70°-80°	176.1	8.9
80°-90°	48.0	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°	501.5	25.3
0°-40°	824.4	41.7
0°-60°	1487.5	75.2
0°-90°	1979.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1979.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	640	640	638	640	640	61
15°	616	616	617	623	623	174
25°	567	570	575	585	587	261
35°	498	504	515	529	533	312
45°	413	421	442	463	472	318
55°	312	326	360	394	407	278
65°	200	224	276	316	331	198
75°	87	127	184	218	223	94
85°	17	36	45	50	50	20
90°	0	0	0	0	0	



TEST NUMBER: P295012

CATALOG NUMBER: 24CZ2-30HE-HRP-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	642.2	642.2	642.2	642.2	642.2
2.5°	643.0	642.2	638.9	642.2	642.2
5°	640.5	640.5	638.0	640.5	640.5
7.5°	636.4	636.4	634.7	638.0	638.0
10°	631.4	631.4	630.6	634.7	634.7
12.5°	623.9	624.8	623.9	628.9	628.9
15°	615.7	616.5	617.3	623.1	623.1
17.5°	604.9	606.5	608.2	614.8	615.7
20°	594.9	595.8	599.1	606.5	607.4
22.5°	581.7	584.2	588.3	595.8	598.3
25°	566.8	570.1	575.1	585.0	586.7
27.5°	552.7	555.2	561.8	572.6	575.9
30°	535.3	539.4	547.7	558.5	562.6
32.5°	518.7	522.9	532.8	544.4	547.7
35°	498.0	503.8	515.4	528.7	532.8
37.5°	478.1	483.9	498.0	512.9	517.9
40°	457.4	464.0	478.9	496.3	503.0
42.5°	435.0	444.1	460.7	479.8	487.2
45°	412.6	420.9	441.6	463.2	471.5
47.5°	388.6	398.6	420.9	446.6	456.6
50°	362.9	375.4	401.0	429.2	440.0
52.5°	337.2	351.3	380.3	411.8	423.4
55°	312.4	325.6	360.4	394.4	406.8
57.5°	285.0	301.6	339.7	376.2	388.6
60°	256.9	275.1	319.0	357.1	370.4
62.5°	228.7	249.4	299.1	337.2	351.3
65°	200.5	223.7	275.9	316.5	330.6
67.5°	173.2	198.9	254.4	295.0	309.1
70°	141.7	174.0	231.2	271.0	285.0
72.5°	112.7	150.0	208.8	246.1	258.5
75°	87.0	126.8	184.0	217.9	222.9
77.5°	63.8	103.6	158.3	169.9	170.7
80°	43.1	82.9	121.0	119.3	121.0
82.5°	28.2	62.1	76.2	85.3	86.2
85°	16.6	36.5	44.7	49.7	50.5
87.5°	8.3	12.4	15.7	16.6	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)