

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: P295013

Luminaire Tested: **24CZ2-30HE-HRP-UNV-L940-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: P295013  
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-L940-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (168) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1999.7 lumens  
Efficiency: N/A  
Efficacy: 89.3 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

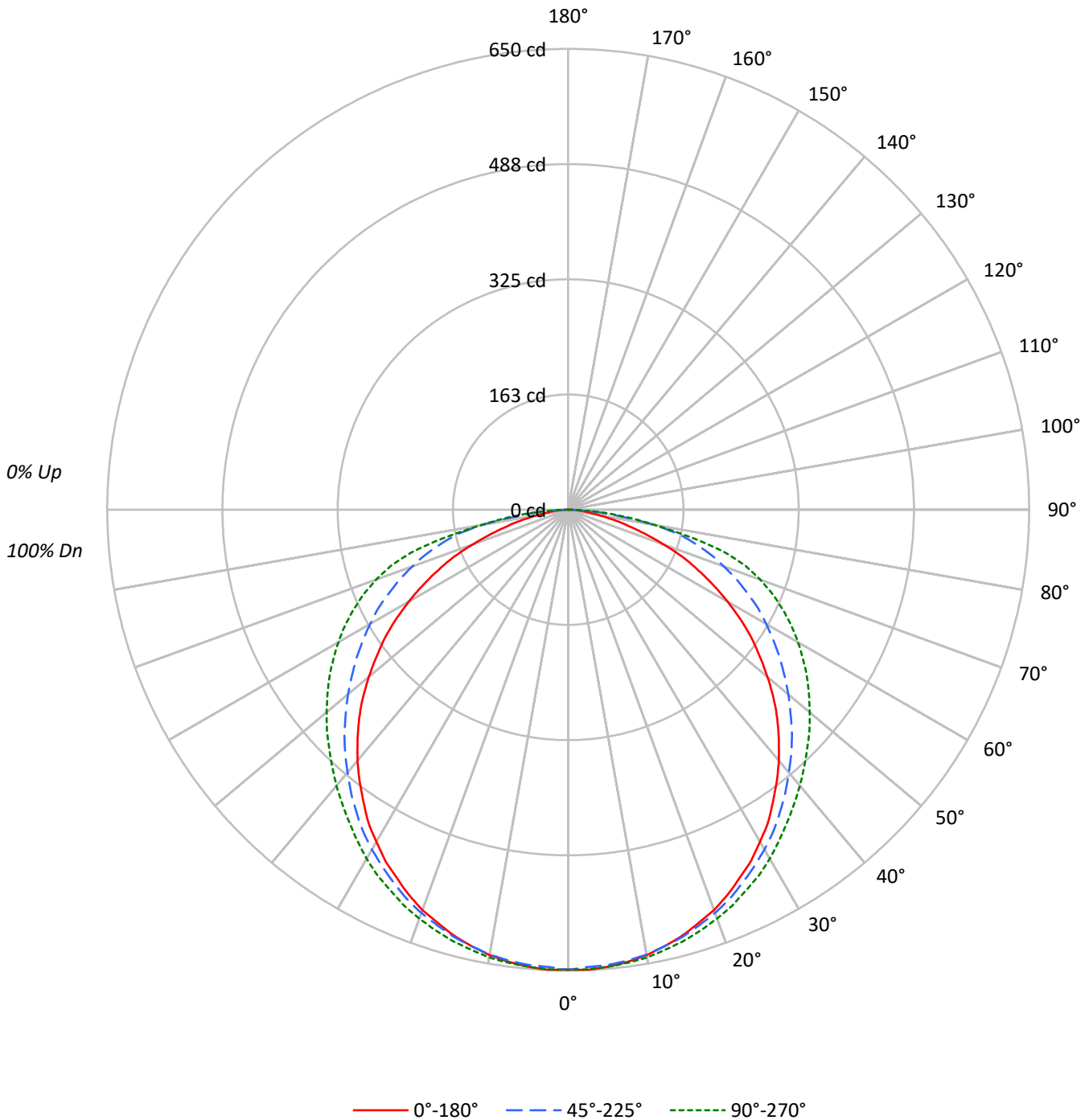
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

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

	0°	45°	90°
0°	873	873	873
5°	874	871	874
10°	872	870	876
15°	866	869	877
20°	861	867	879
25°	850	863	880
30°	840	860	883
35°	826	855	884
40°	812	850	893
45°	793	849	906
50°	768	848	930
55°	740	854	964
60°	698	867	1007
65°	645	888	1063
70°	563	919	1133
75°	457	966	1171
80°	337	947	947
85°	258	698	789



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.5	3.1
10°-20°	176.5	8.8
20°-30°	268.7	13.4
30°-40°	326.3	16.3
40°-50°	344.7	17.2
50°-60°	325.3	16.3
60°-70°	270.4	13.5
70°-80°	177.9	8.9
80°-90°	48.5	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°	506.7	25.3
0°-40°	832.9	41.7
0°-60°	1502.9	75.2
0°-90°	1999.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1999.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	649	649	649	649	649	
5°	647	647	645	647	647	61
15°	622	623	624	630	630	175
25°	573	576	581	591	593	264
35°	503	509	521	534	538	315
45°	417	425	446	468	476	321
55°	316	329	364	398	411	281
65°	203	226	279	320	334	200
75°	88	128	186	220	225	95
85°	17	37	45	50	51	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	648.8	648.8	648.8	648.8	648.8
2.5°	649.6	648.8	645.5	648.8	648.8
5°	647.1	647.1	644.6	647.1	647.1
7.5°	643.0	643.0	641.3	644.6	644.6
10°	637.9	637.9	637.1	641.3	641.3
12.5°	630.4	631.2	630.4	635.4	635.4
15°	622.0	622.9	623.7	629.6	629.6
17.5°	611.1	612.8	614.5	621.2	622.0
20°	601.1	601.9	605.3	612.8	613.7
22.5°	587.7	590.2	594.4	601.9	604.4
25°	572.6	576.0	581.0	591.0	592.7
27.5°	558.4	560.9	567.6	578.5	581.8
30°	540.8	545.0	553.4	564.3	568.4
32.5°	524.1	528.3	538.3	550.0	553.4
35°	503.1	509.0	520.7	534.1	538.3
37.5°	483.1	488.9	503.1	518.2	523.2
40°	462.1	468.8	483.9	501.5	508.2
42.5°	439.5	448.7	465.5	484.7	492.3
45°	416.9	425.3	446.2	468.0	476.4
47.5°	392.6	402.7	425.3	451.2	461.3
50°	366.7	379.2	405.2	433.7	444.5
52.5°	340.7	355.0	384.3	416.1	427.8
55°	315.6	329.0	364.2	398.5	411.1
57.5°	288.0	304.7	343.2	380.1	392.6
60°	259.5	277.9	322.3	360.8	374.2
62.5°	231.1	252.0	302.2	340.7	355.0
65°	202.6	226.0	278.8	319.8	334.0
67.5°	175.0	200.9	257.0	298.0	312.3
70°	143.2	175.8	233.6	273.8	288.0
72.5°	113.9	151.5	211.0	248.6	261.2
75°	87.9	128.1	185.9	220.2	225.2
77.5°	64.5	104.6	159.9	171.6	172.5
80°	43.5	83.7	122.2	120.6	122.2
82.5°	28.5	62.8	77.0	86.2	87.1
85°	16.7	36.8	45.2	50.2	51.1
87.5°	8.4	12.6	15.9	16.7	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)