

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: P294849

Luminaire Tested: **22CZ2-34HE-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: P294849  
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: 22CZ2-34HE-HRP-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (196) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2328.7 lumens  
Efficiency: N/A  
Efficacy: 90.3 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

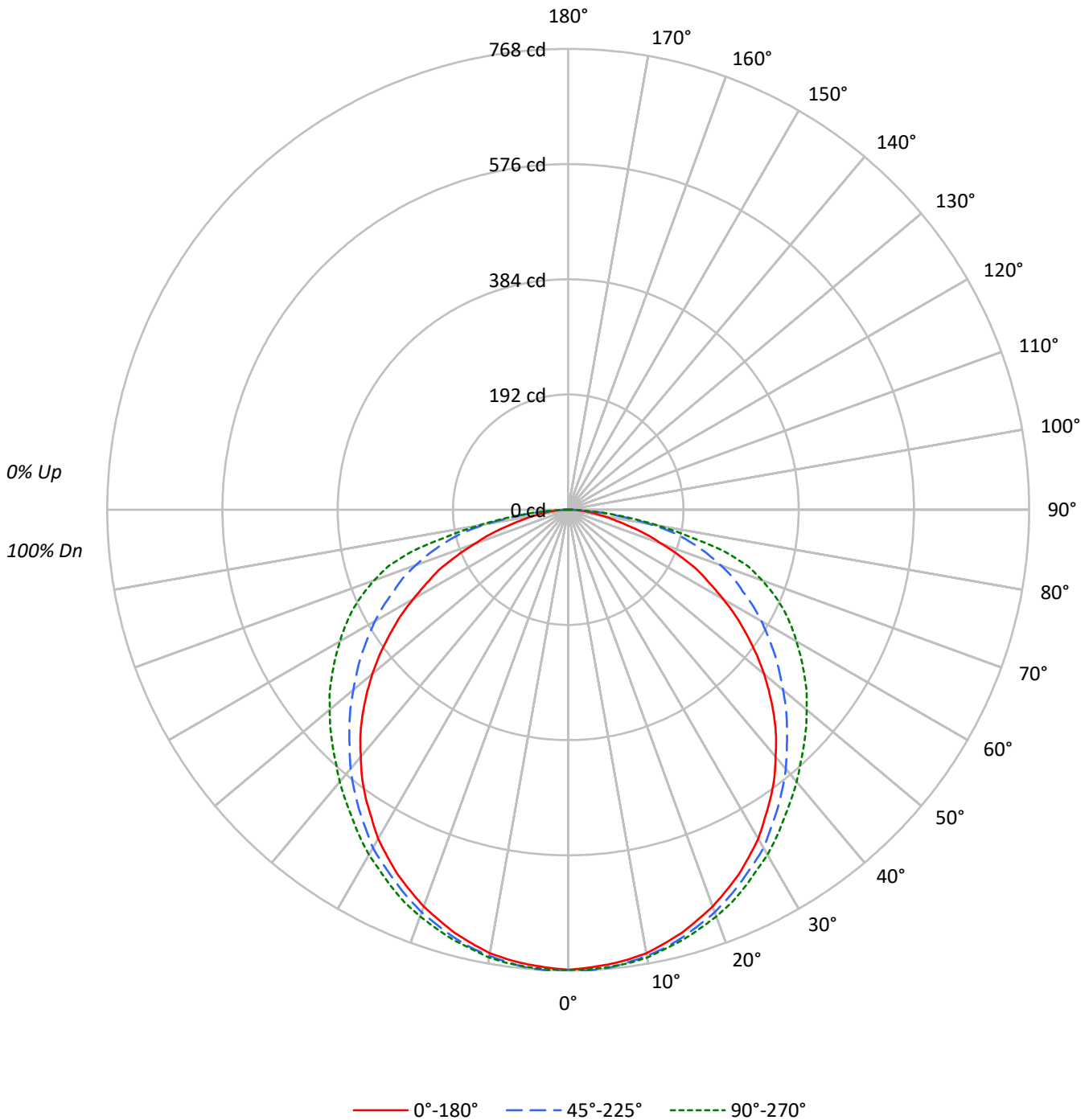
Input Watts (W): 25.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
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	87	84
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	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	25	35	29	24

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

	0°	45°	90°
0°	2063	2063	2063
5°	2055	2071	2067
10°	2051	2063	2071
15°	2034	2054	2067
20°	2015	2044	2066
25°	1993	2028	2063
30°	1967	2022	2063
35°	1930	1998	2061
40°	1888	1982	2080
45°	1845	1962	2113
50°	1783	1955	2171
55°	1702	1971	2254
60°	1605	2000	2364
65°	1515	2039	2525
70°	1294	2127	2704
75°	1084	2215	2810
80°	888	2140	2345
85°	772	1587	1723



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.7	3.1
10°-20°	207.9	8.9
20°-30°	315.1	13.5
30°-40°	380.4	16.3
40°-50°	399.7	17.2
50°-60°	376.1	16.2
60°-70°	313.6	13.5
70°-80°	207.8	8.9
80°-90°	55.4	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°	595.6	25.6
0°-40°	976.0	41.9
0°-60°	1751.9	75.2
0°-90°	2328.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2328.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	761	762	767	767	765	72
15°	730	733	737	740	742	206
25°	671	676	683	692	695	309
35°	588	594	608	621	627	367
45°	485	492	516	542	555	373
55°	363	379	420	463	480	325
65°	238	258	320	373	397	232
75°	104	145	213	257	270	113
85°	25	38	51	56	56	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	766.8	766.8	766.8	766.8	766.8
2.5°	763.9	765.3	768.3	768.3	766.8
5°	760.9	762.4	766.8	766.8	765.3
7.5°	756.5	758.0	760.9	763.9	762.4
10°	750.6	752.1	755.1	758.0	758.0
12.5°	740.4	741.8	747.7	749.2	749.2
15°	730.1	733.0	737.4	740.4	741.8
17.5°	716.9	719.8	725.7	731.5	731.5
20°	703.6	706.6	713.9	719.8	721.3
22.5°	687.5	691.9	699.2	706.6	709.5
25°	671.3	675.7	683.1	691.9	694.8
27.5°	652.2	656.6	666.9	677.2	678.7
30°	633.1	637.5	650.8	659.6	664.0
32.5°	609.6	615.5	628.7	641.9	646.3
35°	587.6	593.5	608.2	621.4	627.3
37.5°	564.1	570.0	586.1	602.3	609.6
40°	537.6	545.0	564.1	581.7	592.0
42.5°	512.7	520.0	539.1	562.6	572.9
45°	484.8	492.1	515.6	542.1	555.3
47.5°	455.4	464.2	492.1	524.4	537.6
50°	426.0	436.3	467.1	503.9	518.5
52.5°	395.2	408.4	443.6	483.3	500.9
55°	362.8	379.0	420.1	462.7	480.4
57.5°	332.0	346.7	395.2	440.7	459.8
60°	298.2	317.3	371.7	418.7	439.2
62.5°	265.9	286.5	346.7	396.6	418.7
65°	238.0	258.5	320.2	373.1	396.6
67.5°	201.2	229.2	298.2	348.1	371.7
70°	164.5	202.7	270.3	321.7	343.7
72.5°	136.6	173.3	242.4	293.8	314.4
75°	104.3	145.4	213.0	257.1	270.3
77.5°	77.9	120.5	182.2	204.2	205.7
80°	57.3	92.5	138.1	145.4	151.3
82.5°	39.7	64.6	89.6	98.4	101.4
85°	25.0	38.2	51.4	55.8	55.8
87.5°	13.2	14.7	17.6	17.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)