

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: P271983

Luminaire Tested: **22CZ2-29HE-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: P271983  
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: 22CZ2-29HE-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,RIBBED LENS, 90CRI  
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: 2513.0 lumens  
Efficiency: N/A  
Efficacy: 113.2 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

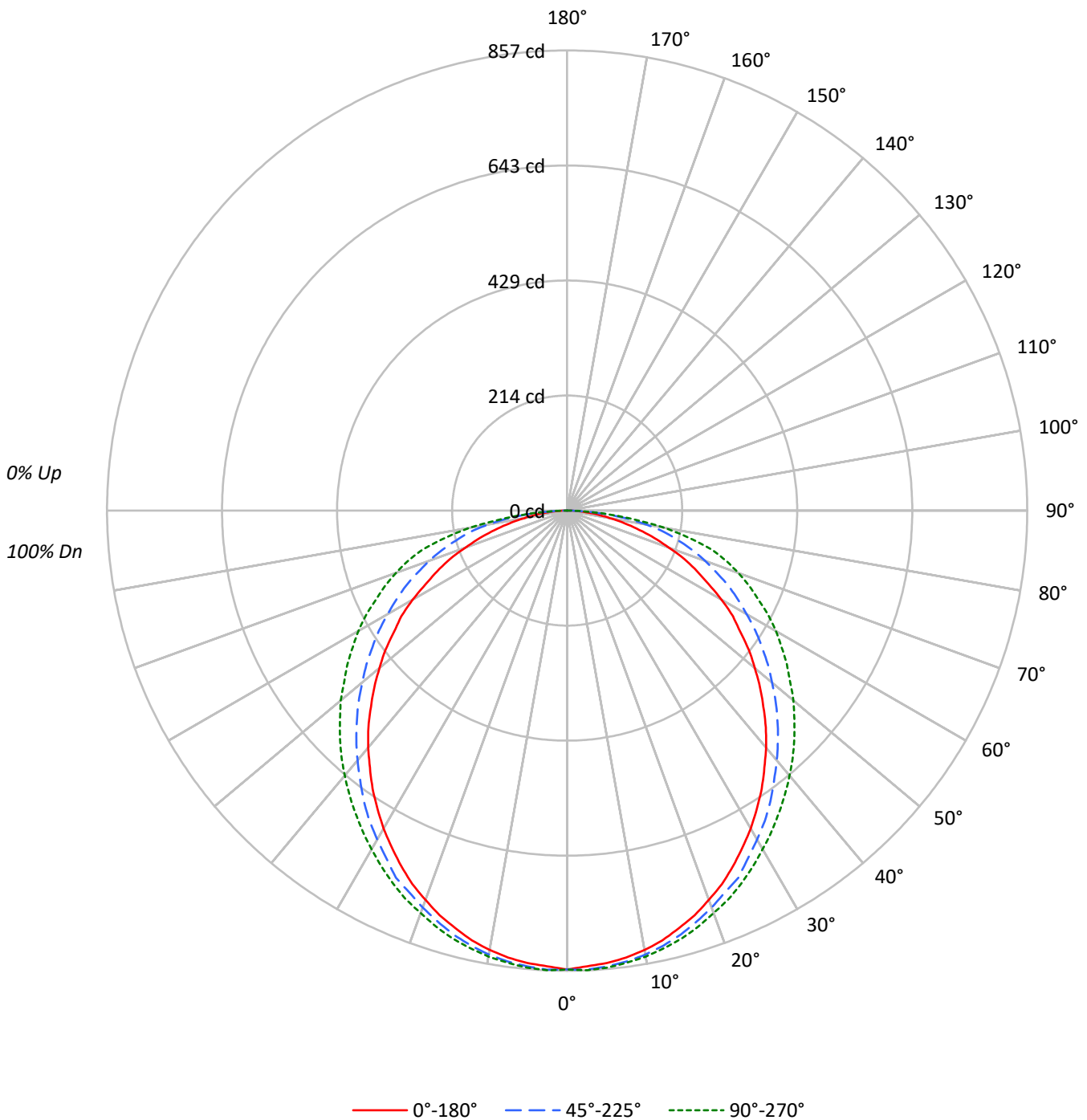
Input Watts (W): 22.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2299	2299	2299
5°	2285	2301	2308
10°	2271	2294	2304
15°	2243	2277	2298
20°	2210	2252	2284
25°	2170	2240	2276
30°	2125	2198	2263
35°	2076	2169	2258
40°	2024	2133	2263
45°	1967	2108	2278
50°	1910	2086	2304
55°	1845	2077	2344
60°	1790	2076	2416
65°	1701	2110	2504
70°	1586	2150	2666
75°	1452	2224	2880
80°	1265	2318	2836
85°	1108	2062	2254



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.8	3.2
10°-20°	230.2	9.2
20°-30°	345.5	13.7
30°-40°	412.9	16.4
40°-50°	429.3	17.1
50°-60°	397.9	15.8
60°-70°	326.4	13.0
70°-80°	220.6	8.8
80°-90°	69.3	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°	656.5	26.1
0°-40°	1069.4	42.6
0°-60°	1896.6	75.5
0°-90°	2513.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2513.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	846	847	852	853	854	80
15°	805	809	817	822	825	227
25°	731	737	754	763	767	337
35°	632	640	660	680	688	395
45°	517	527	554	586	598	399
55°	393	406	443	482	500	353
65°	267	282	331	375	393	264
75°	140	163	214	257	277	148
85°	36	50	67	74	73	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	854.5	854.5	854.5	854.5	854.5
2.5°	849.5	852.0	855.7	856.9	856.9
5°	845.8	847.0	852.0	853.2	854.5
7.5°	839.6	842.1	847.0	848.3	849.5
10°	831.0	833.4	839.6	842.1	843.3
12.5°	819.8	822.3	829.7	833.4	834.7
15°	805.0	808.7	817.4	822.3	824.8
17.5°	790.2	793.9	802.5	809.9	812.4
20°	771.6	780.3	786.5	796.3	797.6
22.5°	753.1	758.0	769.1	779.0	784.0
25°	730.8	737.0	754.3	763.0	766.7
27.5°	707.3	716.0	729.6	743.2	748.1
30°	683.8	690.0	707.3	723.4	728.3
32.5°	657.9	666.5	685.1	701.1	708.6
35°	631.9	640.5	660.3	680.1	687.5
37.5°	603.4	613.3	633.1	656.6	666.5
40°	576.2	583.7	607.2	635.6	644.3
42.5°	547.8	556.5	581.2	612.1	622.0
45°	516.9	526.8	554.0	586.1	598.5
47.5°	487.2	497.1	526.8	558.9	573.8
50°	456.3	468.7	498.3	535.4	550.3
52.5°	426.6	437.7	471.1	509.5	523.1
55°	393.2	405.6	442.7	482.3	499.6
57.5°	366.0	374.7	415.5	456.3	473.6
60°	332.6	343.8	385.8	429.1	448.9
62.5°	296.8	315.3	358.6	403.1	422.9
65°	267.1	281.9	331.4	374.7	393.2
67.5°	236.2	252.3	300.5	346.2	367.3
70°	201.6	222.6	273.3	319.0	338.8
72.5°	170.6	192.9	244.8	289.4	310.4
75°	139.7	163.2	213.9	257.2	277.0
77.5°	110.1	136.0	185.5	218.9	231.2
80°	81.6	106.3	149.6	173.1	183.0
82.5°	56.9	77.9	110.1	122.4	124.9
85°	35.9	49.5	66.8	74.2	73.0
87.5°	16.1	19.8	24.7	27.2	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)