

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: P294839

Luminaire Tested: **22CZ2-29HE-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: P294839
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: 22CZ2-29HE-HRP-UNV-L930-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (196) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1954.5 lumens
Efficiency: N/A
Efficacy: 88.0 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

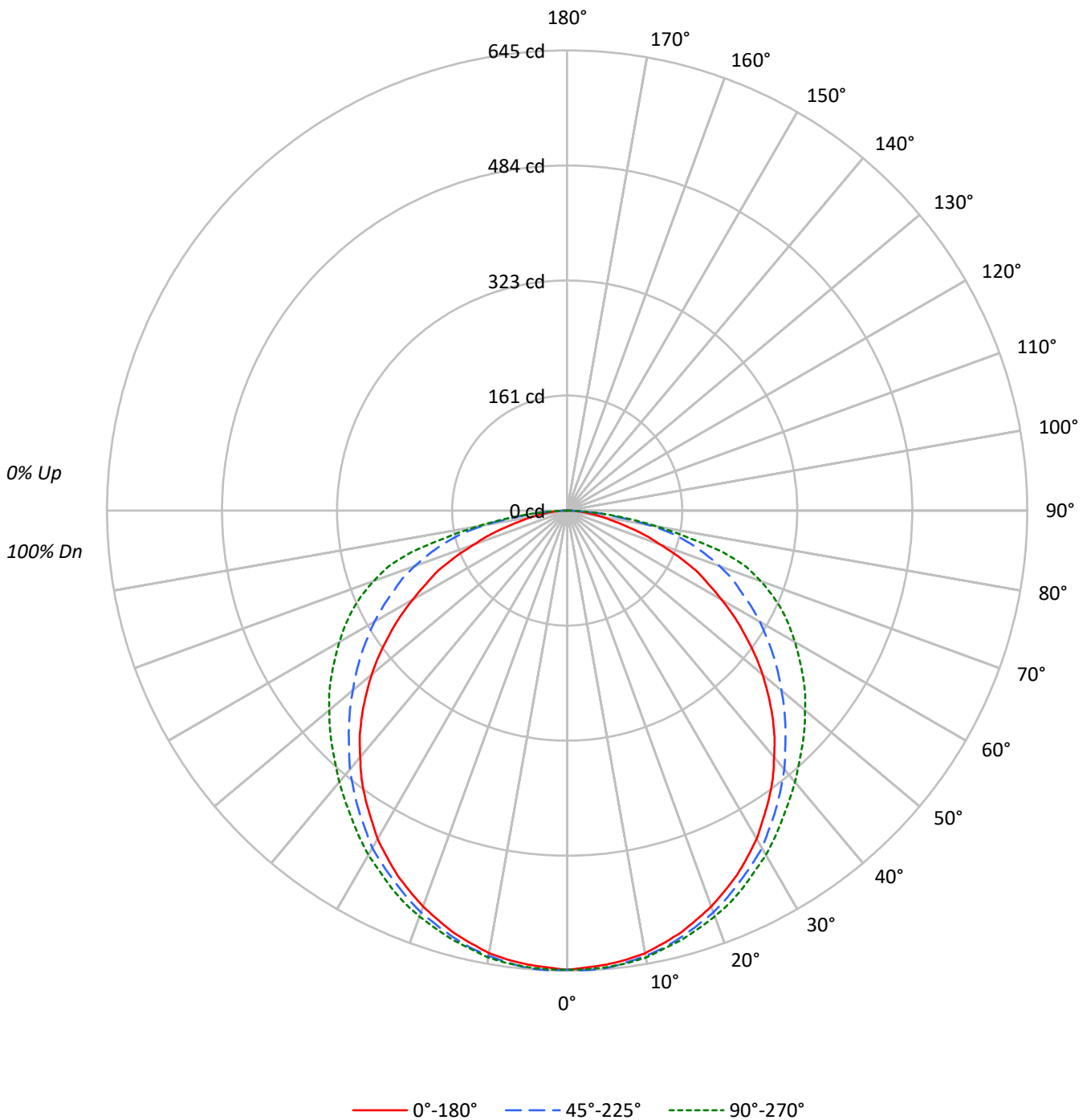
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1732	1732	1732
5°	1725	1739	1735
10°	1721	1732	1738
15°	1707	1724	1735
20°	1691	1716	1734
25°	1673	1702	1732
30°	1651	1697	1732
35°	1620	1677	1730
40°	1585	1663	1746
45°	1549	1647	1774
50°	1497	1641	1822
55°	1429	1654	1892
60°	1347	1679	1984
65°	1272	1712	2120
70°	1087	1785	2270
75°	910	1859	2359
80°	745	1796	1968
85°	648	1334	1448



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.0	3.1
10°-20°	174.5	8.9
20°-30°	264.4	13.5
30°-40°	319.3	16.3
40°-50°	335.5	17.2
50°-60°	315.7	16.2
60°-70°	263.2	13.5
70°-80°	174.4	8.9
80°-90°	46.5	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°	499.9	25.6
0°-40°	819.2	41.9
0°-60°	1470.4	75.2
0°-90°	1954.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1954.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	644	644	644	644	644	
5°	639	640	644	644	642	61
15°	613	615	619	621	623	173
25°	564	567	573	581	583	259
35°	493	498	510	522	526	308
45°	407	413	433	455	466	313
55°	304	318	353	388	403	272
65°	200	217	269	313	333	194
75°	88	122	179	216	227	95
85°	21	32	43	47	47	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	643.6	643.6	643.6	643.6	643.6
2.5°	641.1	642.4	644.8	644.8	643.6
5°	638.7	639.9	643.6	643.6	642.4
7.5°	635.0	636.2	638.7	641.1	639.9
10°	630.0	631.3	633.7	636.2	636.2
12.5°	621.4	622.6	627.6	628.8	628.8
15°	612.8	615.2	618.9	621.4	622.6
17.5°	601.7	604.1	609.1	614.0	614.0
20°	590.6	593.0	599.2	604.1	605.4
22.5°	577.0	580.7	586.9	593.0	595.5
25°	563.5	567.2	573.3	580.7	583.2
27.5°	547.4	551.1	559.8	568.4	569.6
30°	531.4	535.1	546.2	553.6	557.3
32.5°	511.7	516.6	527.7	538.8	542.5
35°	493.2	498.1	510.4	521.5	526.5
37.5°	473.5	478.4	491.9	505.5	511.7
40°	451.3	457.4	473.5	488.2	496.9
42.5°	430.3	436.5	452.5	472.2	480.9
45°	406.9	413.0	432.8	455.0	466.1
47.5°	382.2	389.6	413.0	440.2	451.3
50°	357.6	366.2	392.1	422.9	435.2
52.5°	331.7	342.8	372.4	405.6	420.4
55°	304.5	318.1	352.6	388.4	403.2
57.5°	278.6	291.0	331.7	369.9	385.9
60°	250.3	266.3	311.9	351.4	368.7
62.5°	223.2	240.4	291.0	332.9	351.4
65°	199.7	217.0	268.8	313.2	332.9
67.5°	168.9	192.3	250.3	292.2	311.9
70°	138.1	170.1	226.9	270.0	288.5
72.5°	114.7	145.5	203.4	246.6	263.9
75°	87.5	122.1	178.8	215.8	226.9
77.5°	65.3	101.1	152.9	171.4	172.6
80°	48.1	77.7	115.9	122.1	127.0
82.5°	33.3	54.2	75.2	82.6	85.1
85°	21.0	32.1	43.2	46.9	46.9
87.5°	11.1	12.3	14.8	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)