

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: P294832

Luminaire Tested: **22CZ2-24HE-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: P294832
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: 22CZ2-24HE-HRP-UNV-L935-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (112) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1644.8 lumens
Efficiency: N/A
Efficacy: 85.7 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

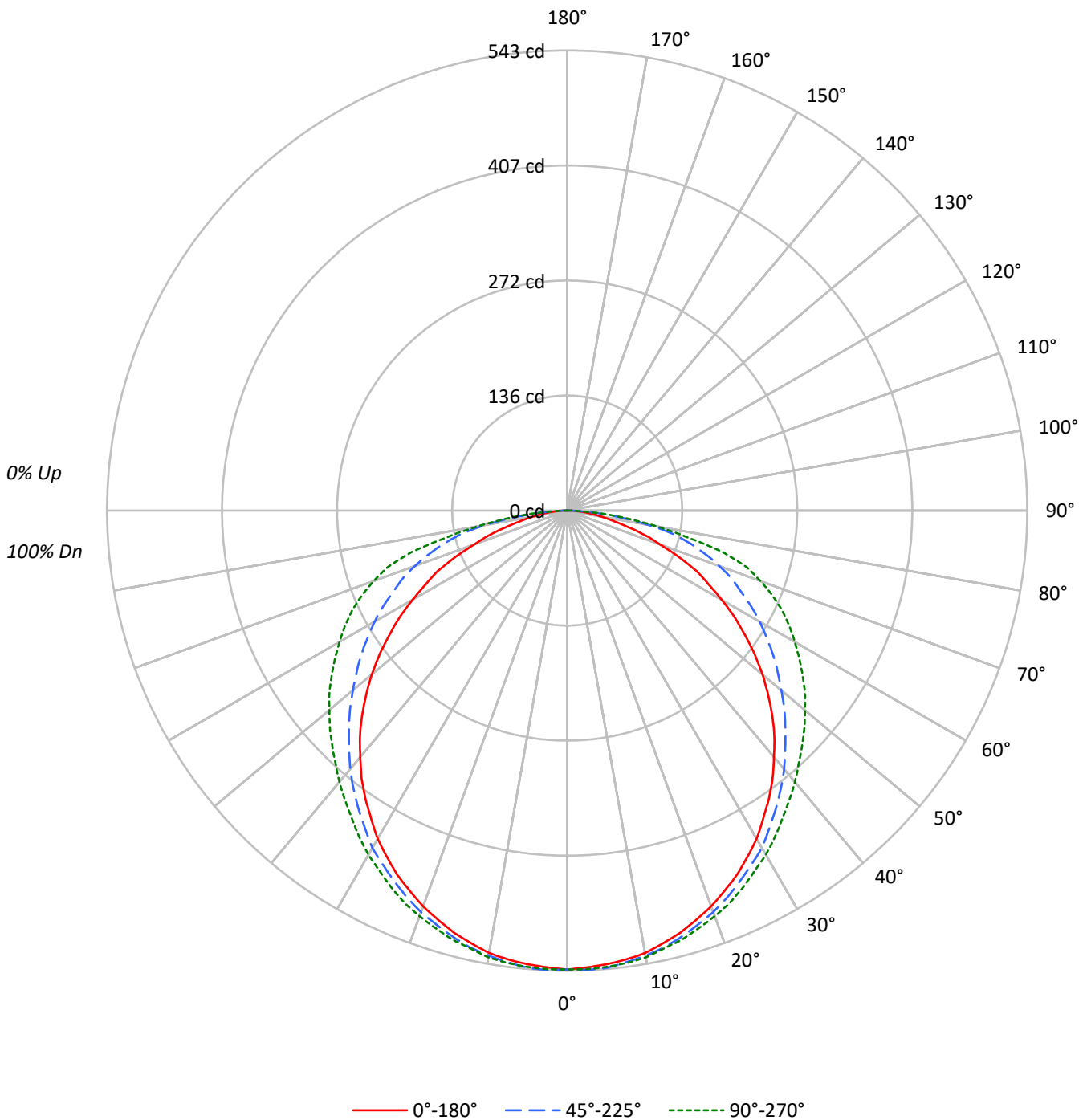
Input Watts (W): 19.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	84	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°	1457	1457	1457
5°	1452	1463	1460
10°	1449	1457	1463
15°	1437	1451	1460
20°	1423	1444	1459
25°	1408	1433	1457
30°	1390	1428	1457
35°	1363	1411	1455
40°	1334	1400	1469
45°	1303	1386	1493
50°	1260	1381	1533
55°	1202	1392	1592
60°	1133	1413	1669
65°	1070	1440	1784
70°	914	1502	1910
75°	766	1564	1985
80°	628	1511	1657
85°	543	1121	1216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	3.1
10°-20°	146.8	8.9
20°-30°	222.5	13.5
30°-40°	268.7	16.3
40°-50°	282.3	17.2
50°-60°	265.6	16.2
60°-70°	221.5	13.5
70°-80°	146.8	8.9
80°-90°	39.1	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°	420.7	25.6
0°-40°	689.4	41.9
0°-60°	1237.4	75.2
0°-90°	1644.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1644.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	537	538	542	542	541	51
15°	516	518	521	523	524	145
25°	474	477	482	489	491	218
35°	415	419	430	439	443	259
45°	342	348	364	383	392	264
55°	256	268	297	327	339	229
65°	168	183	226	264	280	164
75°	74	103	150	182	191	80
85°	18	27	36	39	39	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	541.6	541.6	541.6	541.6	541.6
2.5°	539.5	540.6	542.6	542.6	541.6
5°	537.4	538.5	541.6	541.6	540.6
7.5°	534.3	535.4	537.4	539.5	538.5
10°	530.2	531.2	533.3	535.4	535.4
12.5°	522.9	524.0	528.1	529.1	529.1
15°	515.7	517.7	520.8	522.9	524.0
17.5°	506.3	508.4	512.5	516.7	516.7
20°	497.0	499.1	504.2	508.4	509.4
22.5°	485.6	488.7	493.9	499.1	501.1
25°	474.2	477.3	482.5	488.7	490.8
27.5°	460.7	463.8	471.0	478.3	479.3
30°	447.2	450.3	459.6	465.9	469.0
32.5°	430.6	434.7	444.1	453.4	456.5
35°	415.0	419.2	429.5	438.9	443.0
37.5°	398.4	402.6	414.0	425.4	430.6
40°	379.7	384.9	398.4	410.9	418.1
42.5°	362.1	367.3	380.8	397.4	404.6
45°	342.4	347.6	364.2	382.9	392.2
47.5°	321.6	327.9	347.6	370.4	379.7
50°	300.9	308.1	329.9	355.9	366.3
52.5°	279.1	288.4	313.3	341.3	353.8
55°	256.3	267.7	296.7	326.8	339.3
57.5°	234.5	244.9	279.1	311.3	324.7
60°	210.6	224.1	262.5	295.7	310.2
62.5°	187.8	202.3	244.9	280.1	295.7
65°	168.1	182.6	226.2	263.5	280.1
67.5°	142.1	161.9	210.6	245.9	262.5
70°	116.2	143.2	190.9	227.2	242.8
72.5°	96.5	122.4	171.2	207.5	222.0
75°	73.7	102.7	150.4	181.6	190.9
77.5°	55.0	85.1	128.7	144.2	145.3
80°	40.5	65.4	97.5	102.7	106.9
82.5°	28.0	45.7	63.3	69.5	71.6
85°	17.6	27.0	36.3	39.4	39.4
87.5°	9.3	10.4	12.5	12.5	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)