

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: P295030

Luminaire Tested: **24CZ2-40HE-HRP-UNV-L950-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: P295030  
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: 24CZ2-40HE-HRP-UNV-L950-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (168) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2838.2 lumens  
Efficiency: N/A  
Efficacy: 92.8 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

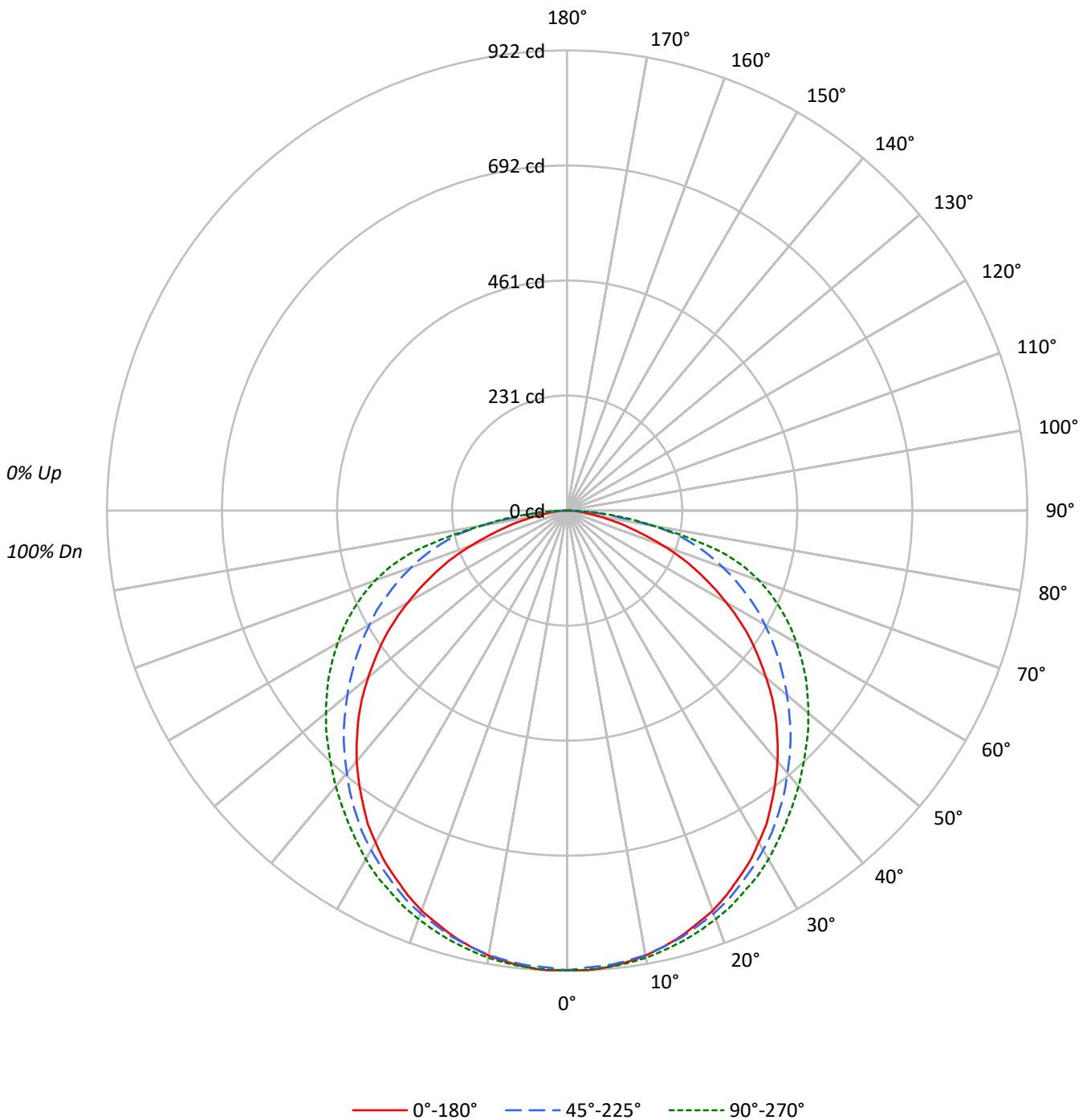
Input Watts (W): 30.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1239	1239	1239
5°	1241	1236	1241
10°	1237	1235	1243
15°	1230	1233	1245
20°	1222	1230	1247
25°	1207	1224	1249
30°	1193	1220	1253
35°	1173	1214	1255
40°	1152	1206	1267
45°	1126	1205	1286
50°	1089	1204	1321
55°	1051	1213	1369
60°	991	1231	1429
65°	915	1260	1509
70°	799	1304	1608
75°	649	1371	1661
80°	479	1344	1344
85°	367	991	1119



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.2	3.1
10°-20°	250.5	8.8
20°-30°	381.4	13.4
30°-40°	463.1	16.3
40°-50°	489.2	17.2
50°-60°	461.6	16.3
60°-70°	383.8	13.5
70°-80°	252.5	8.9
80°-90°	68.8	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°	719.1	25.3
0°-40°	1182.1	41.7
0°-60°	2133.0	75.2
0°-90°	2838.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2838.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	921	921	921	921	921	
5°	918	918	915	918	918	87
15°	883	884	885	894	894	249
25°	813	818	825	839	841	375
35°	714	722	739	758	764	447
45°	592	604	633	664	676	456
55°	448	467	517	566	583	399
65°	288	321	396	454	474	284
75°	125	182	264	312	320	134
85°	24	52	64	71	72	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	920.8	920.8	920.8	920.8	920.8
2.5°	922.0	920.8	916.1	920.8	920.8
5°	918.5	918.5	914.9	918.5	918.5
7.5°	912.5	912.5	910.1	914.9	914.9
10°	905.4	905.4	904.2	910.1	910.1
12.5°	894.7	895.9	894.7	901.8	901.8
15°	882.8	884.0	885.2	893.5	893.5
17.5°	867.4	869.7	872.1	881.6	882.8
20°	853.1	854.3	859.0	869.7	870.9
22.5°	834.1	837.7	843.6	854.3	857.9
25°	812.7	817.5	824.6	838.8	841.2
27.5°	792.5	796.1	805.6	821.0	825.8
30°	767.6	773.5	785.4	800.8	806.8
32.5°	743.8	749.7	764.0	780.6	785.4
35°	714.1	722.4	739.0	758.1	764.0
37.5°	685.6	693.9	714.1	735.5	742.6
40°	655.9	665.4	686.8	711.7	721.2
42.5°	623.8	636.9	660.6	688.0	698.6
45°	591.7	603.6	633.3	664.2	676.1
47.5°	557.3	571.5	603.6	640.4	654.7
50°	520.4	538.2	575.1	615.5	630.9
52.5°	483.6	503.8	545.4	590.5	607.2
55°	447.9	467.0	516.9	565.6	583.4
57.5°	408.7	432.5	487.2	539.4	557.3
60°	368.3	394.5	457.4	512.1	531.1
62.5°	327.9	357.6	428.9	483.6	503.8
65°	287.5	320.8	395.7	453.9	474.1
67.5°	248.3	285.2	364.8	423.0	443.2
70°	203.2	249.5	331.5	388.5	408.7
72.5°	161.6	215.1	299.4	352.9	370.7
75°	124.8	181.8	263.8	312.5	319.6
77.5°	91.5	148.5	226.9	243.6	244.8
80°	61.8	118.8	173.5	171.1	173.5
82.5°	40.4	89.1	109.3	122.4	123.6
85°	23.8	52.3	64.2	71.3	72.5
87.5°	11.9	17.8	22.6	23.8	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)