

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: P295027

Luminaire Tested: **24CZ2-40HE-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: P295027
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-L930-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (168) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2582.6 lumens
Efficiency: N/A
Efficacy: 84.4 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

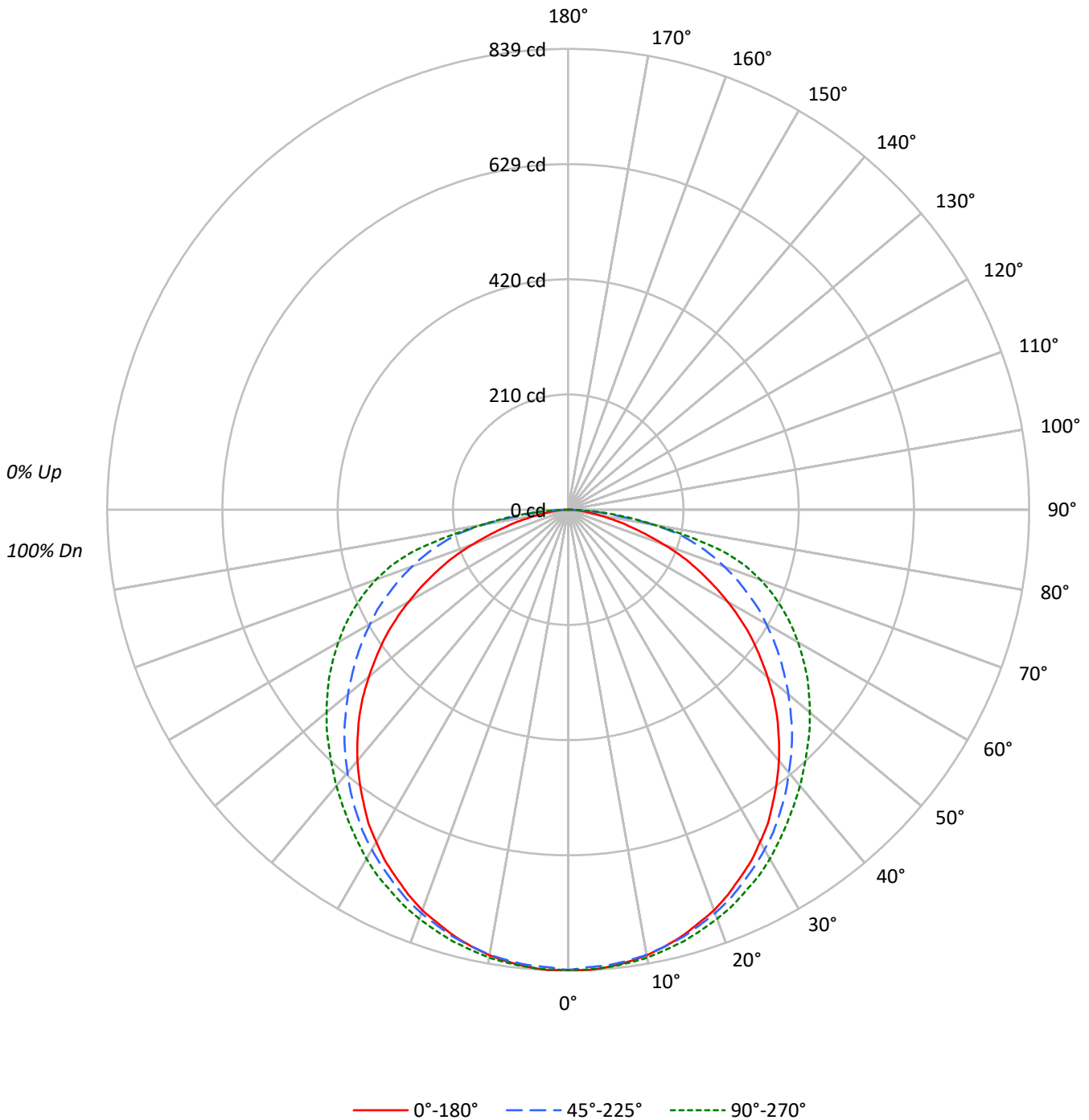
Input Watts (W): 30.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1127	1127	1127
5°	1129	1124	1129
10°	1126	1124	1132
15°	1119	1122	1133
20°	1112	1119	1135
25°	1098	1114	1136
30°	1085	1110	1141
35°	1067	1105	1142
40°	1048	1098	1153
45°	1024	1097	1171
50°	991	1095	1202
55°	956	1103	1245
60°	902	1120	1301
65°	833	1146	1373
70°	727	1187	1463
75°	590	1248	1512
80°	435	1223	1223
85°	333	902	1019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	3.1
10°-20°	227.9	8.8
20°-30°	347.0	13.4
30°-40°	421.4	16.3
40°-50°	445.2	17.2
50°-60°	420.1	16.3
60°-70°	349.3	13.5
70°-80°	229.8	8.9
80°-90°	62.6	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°	654.3	25.3
0°-40°	1075.7	41.7
0°-60°	1940.9	75.2
0°-90°	2582.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2582.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	836	836	832	836	836	79
15°	803	804	806	813	813	227
25°	740	744	750	763	766	341
35°	650	657	672	690	695	407
45°	538	549	576	604	615	415
55°	408	425	470	515	531	363
65°	262	292	360	413	431	259
75°	114	165	240	284	291	122
85°	22	48	58	65	66	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	837.9	837.9	837.9	837.9	837.9
2.5°	839.0	837.9	833.6	837.9	837.9
5°	835.8	835.8	832.5	835.8	835.8
7.5°	830.4	830.4	828.2	832.5	832.5
10°	823.9	823.9	822.8	828.2	828.2
12.5°	814.1	815.2	814.1	820.6	820.6
15°	803.3	804.4	805.5	813.1	813.1
17.5°	789.3	791.4	793.6	802.2	803.3
20°	776.3	777.4	781.7	791.4	792.5
22.5°	759.0	762.2	767.7	777.4	780.6
25°	739.5	743.9	750.4	763.3	765.5
27.5°	721.2	724.4	733.1	747.1	751.4
30°	698.5	703.9	714.7	728.7	734.1
32.5°	676.8	682.2	695.2	710.3	714.7
35°	649.8	657.4	672.5	689.8	695.2
37.5°	623.9	631.4	649.8	669.3	675.7
40°	596.8	605.5	624.9	647.6	656.3
42.5°	567.6	579.5	601.1	626.0	635.7
45°	538.4	549.2	576.3	604.4	615.2
47.5°	507.1	520.1	549.2	582.8	595.7
50°	473.6	489.8	523.3	560.1	574.1
52.5°	440.0	458.4	496.3	537.4	552.5
55°	407.6	424.9	470.3	514.7	530.9
57.5°	371.9	393.6	443.3	490.9	507.1
60°	335.2	359.0	416.3	466.0	483.3
62.5°	298.4	325.4	390.3	440.0	458.4
65°	261.6	291.9	360.0	413.0	431.4
67.5°	226.0	259.5	331.9	384.9	403.3
70°	184.9	227.1	301.7	353.6	371.9
72.5°	147.0	195.7	272.5	321.1	337.3
75°	113.5	165.4	240.0	284.4	290.8
77.5°	83.3	135.1	206.5	221.6	222.7
80°	56.2	108.1	157.9	155.7	157.9
82.5°	36.8	81.1	99.5	111.4	112.4
85°	21.6	47.6	58.4	64.9	66.0
87.5°	10.8	16.2	20.5	21.6	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)