

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: P295063

Luminaire Tested: **24CZ2-60-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: P295063
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: 24CZ2-60-HRP-UNV-L930-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (112) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3872.6 lumens
Efficiency: N/A
Efficacy: 69.7 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

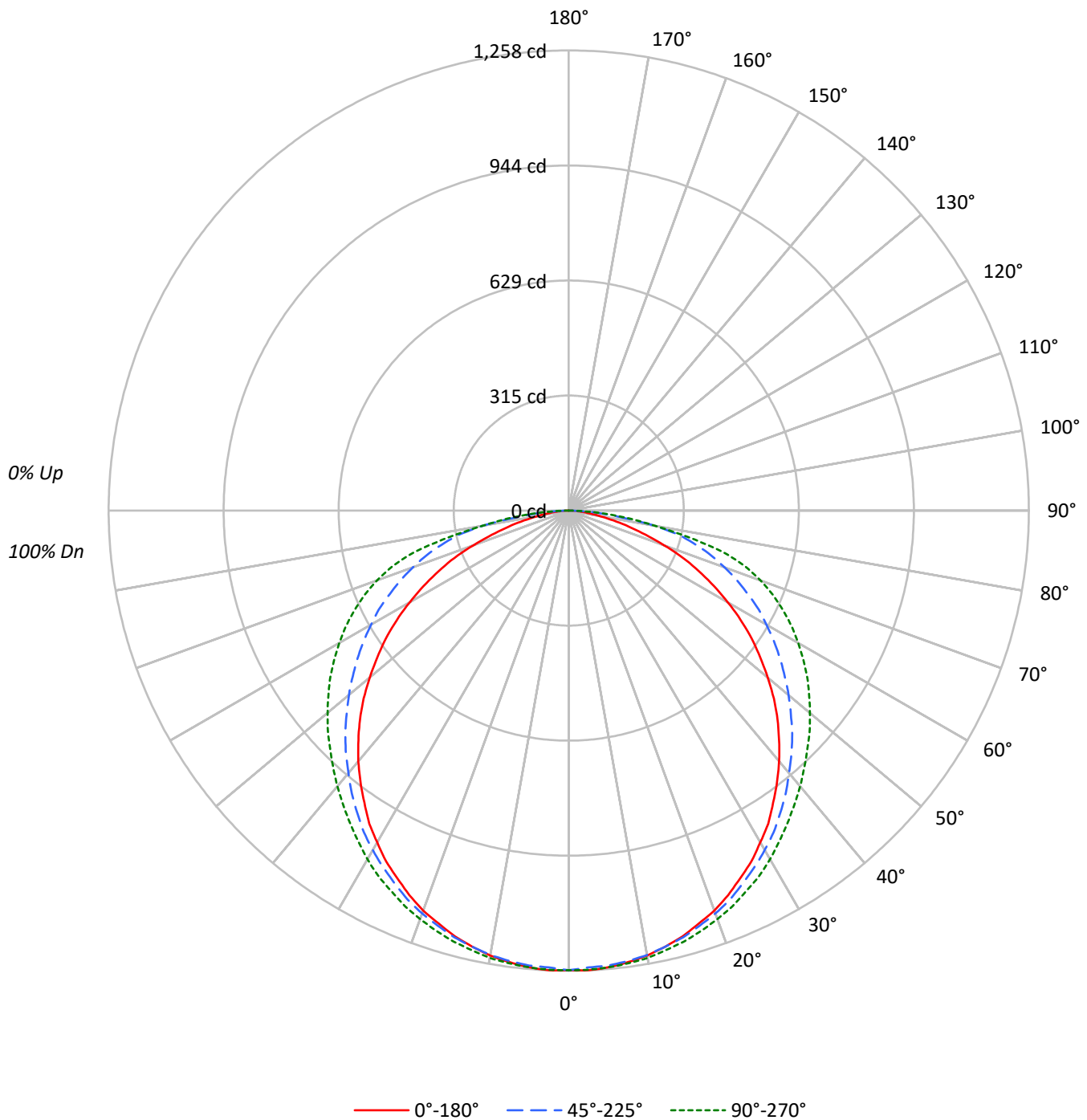
Input Watts (W): 55.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1691	1691	1691
5°	1693	1686	1693
10°	1688	1686	1697
15°	1678	1682	1698
20°	1667	1678	1702
25°	1646	1670	1704
30°	1627	1665	1710
35°	1600	1656	1712
40°	1572	1646	1728
45°	1536	1644	1755
50°	1486	1643	1802
55°	1434	1654	1867
60°	1352	1680	1950
65°	1249	1719	2060
70°	1090	1779	2194
75°	885	1871	2267
80°	653	1834	1834
85°	500	1351	1527



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	3.1
10°-20°	341.8	8.8
20°-30°	520.4	13.4
30°-40°	631.8	16.3
40°-50°	667.5	17.2
50°-60°	629.9	16.3
60°-70°	523.7	13.5
70°-80°	344.6	8.9
80°-90°	93.9	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°	981.2	25.3
0°-40°	1613.0	41.7
0°-60°	2910.4	75.2
0°-90°	3872.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3872.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1253	1253	1248	1253	1253	119
15°	1205	1206	1208	1219	1219	340
25°	1109	1115	1125	1145	1148	512
35°	974	986	1008	1034	1042	610
45°	807	824	864	906	922	622
55°	611	637	705	772	796	544
65°	392	438	540	619	647	388
75°	170	248	360	426	436	183
85°	32	71	88	97	99	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1256.5	1256.5	1256.5	1256.5	1256.5
2.5°	1258.1	1256.5	1250.0	1256.5	1256.5
5°	1253.2	1253.2	1248.4	1253.2	1253.2
7.5°	1245.1	1245.1	1241.9	1248.4	1248.4
10°	1235.4	1235.4	1233.8	1241.9	1241.9
12.5°	1220.8	1222.4	1220.8	1230.5	1230.5
15°	1204.6	1206.2	1207.8	1219.2	1219.2
17.5°	1183.5	1186.8	1190.0	1203.0	1204.6
20°	1164.1	1165.7	1172.2	1186.8	1188.4
22.5°	1138.1	1143.0	1151.1	1165.7	1170.5
25°	1108.9	1115.4	1125.2	1144.6	1147.9
27.5°	1081.4	1086.2	1099.2	1120.3	1126.8
30°	1047.3	1055.4	1071.7	1092.7	1100.8
32.5°	1014.9	1023.0	1042.5	1065.2	1071.7
35°	974.4	985.7	1008.4	1034.4	1042.5
37.5°	935.5	946.8	974.4	1003.6	1013.3
40°	894.9	907.9	937.1	971.1	984.1
42.5°	851.2	869.0	901.4	938.7	953.3
45°	807.4	823.6	864.1	906.3	922.5
47.5°	760.4	779.8	823.6	873.9	893.3
50°	710.1	734.4	784.7	839.8	860.9
52.5°	659.9	687.4	744.2	805.8	828.5
55°	611.2	637.2	705.2	771.7	796.0
57.5°	557.7	590.1	664.7	736.1	760.4
60°	502.6	538.3	624.2	698.8	724.7
62.5°	447.5	488.0	585.3	659.9	687.4
65°	392.3	437.7	539.9	619.3	646.9
67.5°	338.8	389.1	497.7	577.2	604.7
70°	277.2	340.5	452.3	530.2	557.7
72.5°	220.5	293.4	408.6	481.5	505.8
75°	170.2	248.1	359.9	426.4	436.1
77.5°	124.8	202.7	309.7	332.4	334.0
80°	84.3	162.1	236.7	233.5	236.7
82.5°	55.1	121.6	149.2	167.0	168.6
85°	32.4	71.3	87.5	97.3	98.9
87.5°	16.2	24.3	30.8	32.4	35.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)