

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: P474372

Luminaire Tested: **24CZ2-45HE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474372
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3683.7 lumens
Efficiency: N/A
Efficacy: 104.4 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

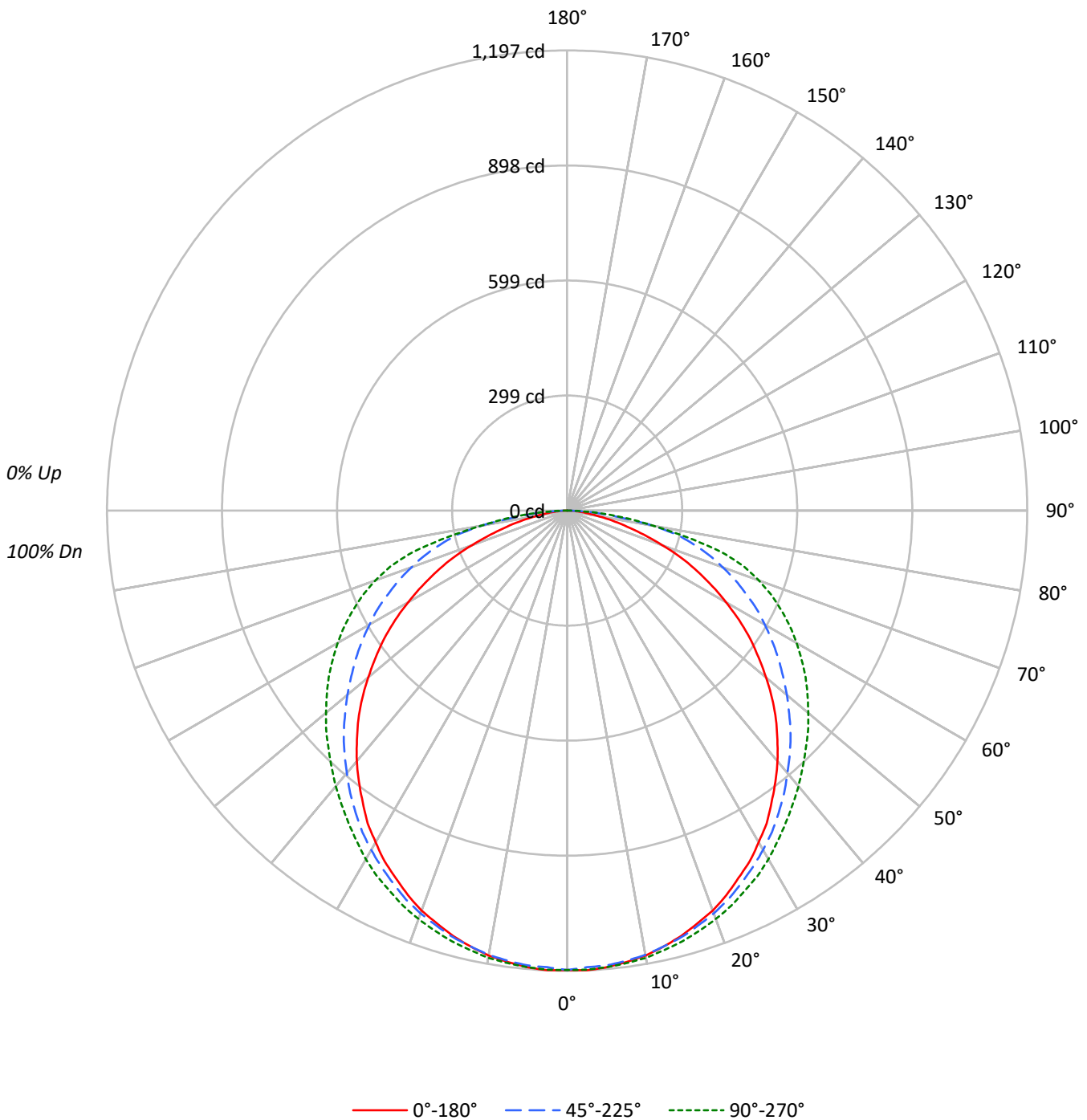
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1608	1608	1608
5°	1610	1604	1610
10°	1605	1603	1614
15°	1596	1600	1615
20°	1585	1596	1619
25°	1566	1589	1621
30°	1548	1584	1627
35°	1522	1576	1629
40°	1495	1566	1644
45°	1461	1564	1670
50°	1414	1562	1714
55°	1364	1574	1776
60°	1286	1598	1855
65°	1188	1635	1959
70°	1037	1692	2087
75°	842	1780	2156
80°	621	1745	1745
85°	477	1286	1451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.2	3.1
10°-20°	325.1	8.8
20°-30°	495.0	13.4
30°-40°	601.0	16.3
40°-50°	635.0	17.2
50°-60°	599.1	16.3
60°-70°	498.2	13.5
70°-80°	327.8	8.9
80°-90°	89.3	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°	933.3	25.3
0°-40°	1534.3	41.7
0°-60°	2768.4	75.2
0°-90°	3683.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3683.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1195	1195	1195	1195	1195	
5°	1192	1192	1187	1192	1192	113
15°	1146	1147	1149	1160	1160	323
25°	1055	1061	1070	1089	1092	487
35°	927	938	959	984	992	580
45°	768	784	822	862	878	591
55°	581	606	671	734	757	518
65°	373	416	514	589	615	369
75°	162	236	342	406	415	174
85°	31	68	83	93	94	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1195.2	1195.2	1195.2	1195.2	1195.2
2.5°	1196.7	1195.2	1189.0	1195.2	1195.2
5°	1192.2	1192.2	1187.4	1192.2	1192.2
7.5°	1184.4	1184.4	1181.2	1187.4	1187.4
10°	1175.1	1175.1	1173.6	1181.2	1181.2
12.5°	1161.3	1162.7	1161.3	1170.5	1170.5
15°	1145.8	1147.4	1148.9	1159.7	1159.7
17.5°	1125.8	1128.8	1132.0	1144.2	1145.8
20°	1107.3	1108.7	1114.9	1128.8	1130.4
22.5°	1082.6	1087.2	1095.0	1108.7	1113.5
25°	1054.8	1060.9	1070.3	1088.8	1091.8
27.5°	1028.7	1033.2	1045.6	1065.7	1071.9
30°	996.2	1004.0	1019.3	1039.4	1047.2
32.5°	965.3	973.1	991.6	1013.1	1019.3
35°	926.9	937.6	959.2	983.9	991.6
37.5°	889.8	900.6	926.9	954.6	963.9
40°	851.2	863.6	891.4	923.7	936.1
42.5°	809.6	826.5	857.4	892.8	906.8
45°	768.0	783.5	821.9	862.0	877.5
47.5°	723.3	741.9	783.5	831.3	849.8
50°	675.5	698.6	746.4	798.8	818.9
52.5°	627.7	653.8	707.8	766.4	788.1
55°	581.4	606.0	670.8	734.1	757.2
57.5°	530.5	561.4	632.3	700.1	723.3
60°	478.0	512.0	593.7	664.6	689.3
62.5°	425.6	464.2	556.7	627.7	653.8
65°	373.2	416.4	513.6	589.1	615.4
67.5°	322.3	370.1	473.4	549.1	575.2
70°	263.7	323.8	430.2	504.3	530.5
72.5°	209.7	279.2	388.6	458.1	481.2
75°	161.9	236.0	342.4	405.5	414.8
77.5°	118.7	192.8	294.6	316.1	317.7
80°	80.2	154.2	225.2	222.1	225.2
82.5°	52.4	115.7	141.8	158.9	160.3
85°	30.9	67.9	83.3	92.6	94.0
87.5°	15.4	23.1	29.3	30.9	33.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)