

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: P474414

Luminaire Tested: **24CZ2-45-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474414
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45-HRP-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3650.4 lumens
Efficiency: N/A
Efficacy: 104.6 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

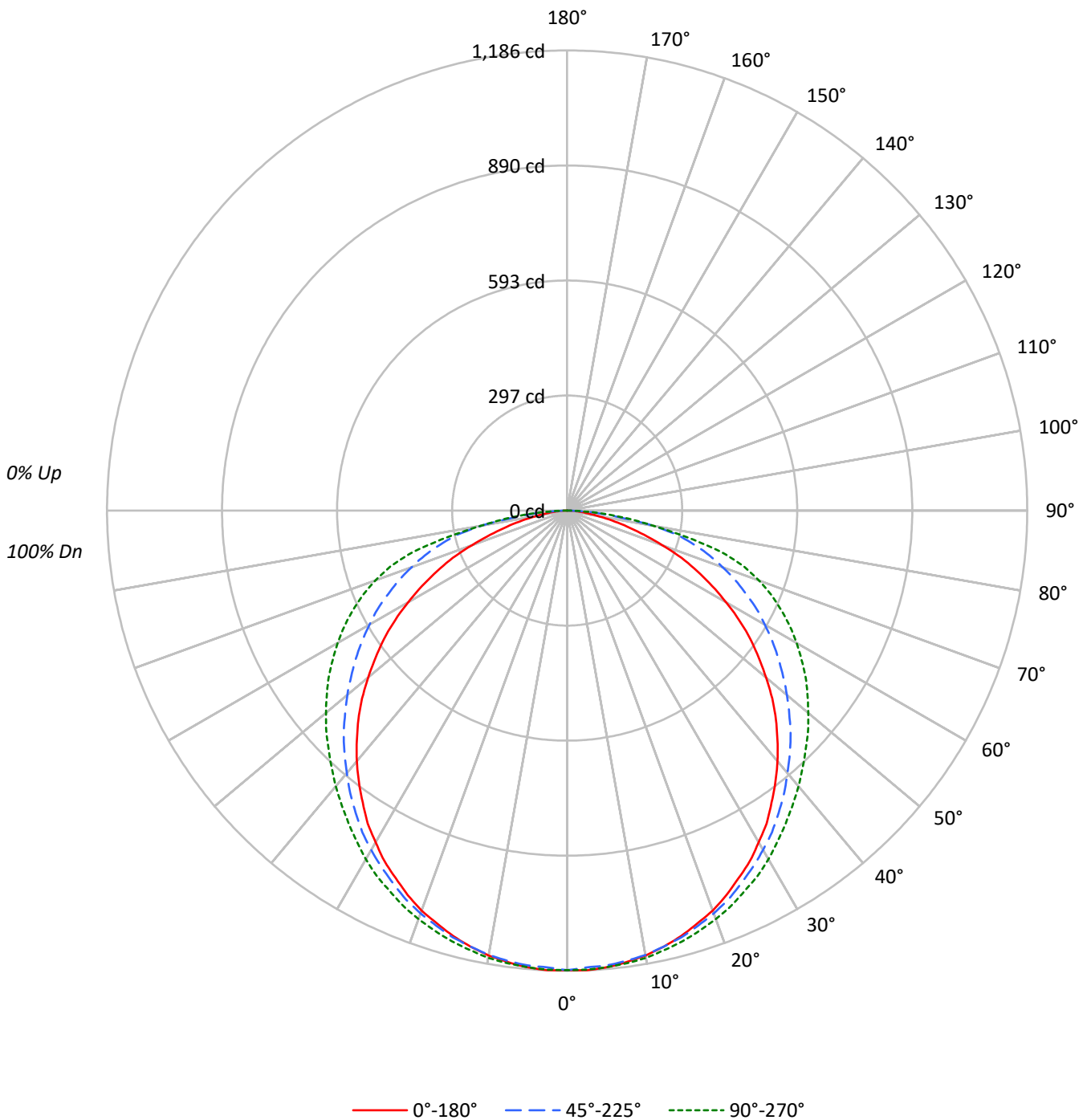
Input Watts (W): 34.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1594	1594	1594
5°	1596	1589	1596
10°	1591	1589	1599
15°	1582	1586	1601
20°	1571	1582	1604
25°	1552	1575	1606
30°	1534	1569	1612
35°	1509	1561	1614
40°	1482	1552	1629
45°	1448	1550	1655
50°	1401	1548	1699
55°	1351	1559	1760
60°	1275	1583	1838
65°	1177	1621	1941
70°	1028	1677	2068
75°	834	1764	2137
80°	616	1729	1729
85°	472	1274	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.2	3.1
10°-20°	322.2	8.8
20°-30°	490.5	13.4
30°-40°	595.6	16.3
40°-50°	629.2	17.2
50°-60°	593.7	16.3
60°-70°	493.7	13.5
70°-80°	324.8	8.9
80°-90°	88.5	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°	924.9	25.3
0°-40°	1520.4	41.7
0°-60°	2743.4	75.2
0°-90°	3650.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3650.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1181	1181	1177	1181	1181	112
15°	1135	1137	1139	1149	1149	320
25°	1045	1051	1061	1079	1082	482
35°	918	929	950	975	983	575
45°	761	776	814	854	870	586
55°	576	601	665	728	750	513
65°	370	413	509	584	610	366
75°	160	234	339	402	411	173
85°	31	67	82	92	93	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1184.4	1184.4	1184.4	1184.4	1184.4
2.5°	1185.9	1184.4	1178.2	1184.4	1184.4
5°	1181.4	1181.4	1176.7	1181.4	1181.4
7.5°	1173.7	1173.7	1170.6	1176.7	1176.7
10°	1164.4	1164.4	1163.0	1170.6	1170.6
12.5°	1150.8	1152.2	1150.8	1159.9	1159.9
15°	1135.4	1137.0	1138.6	1149.2	1149.2
17.5°	1115.7	1118.6	1121.8	1133.9	1135.4
20°	1097.3	1098.7	1104.8	1118.6	1120.2
22.5°	1072.8	1077.4	1085.1	1098.7	1103.4
25°	1045.2	1051.4	1060.6	1079.0	1081.9
27.5°	1019.4	1023.9	1036.1	1056.1	1062.2
30°	987.2	994.9	1010.1	1030.0	1037.7
32.5°	956.6	964.3	982.7	1004.0	1010.1
35°	918.5	929.2	950.5	975.0	982.7
37.5°	881.8	892.5	918.5	946.0	955.2
40°	843.5	855.8	883.4	915.4	927.6
42.5°	802.3	819.1	849.6	884.8	898.6
45°	761.0	776.4	814.5	854.2	869.6
47.5°	716.8	735.1	776.4	823.8	842.1
50°	669.4	692.3	739.7	791.6	811.5
52.5°	622.1	647.9	701.4	759.5	780.9
55°	576.1	600.6	664.7	727.5	750.4
57.5°	525.8	556.3	626.6	693.7	716.8
60°	473.7	507.4	588.3	658.6	683.1
62.5°	421.8	460.0	551.6	622.1	647.9
65°	369.8	412.7	509.0	583.8	609.8
67.5°	319.3	366.7	469.1	544.1	570.0
70°	261.3	320.9	426.3	499.7	525.8
72.5°	207.8	276.7	385.1	453.9	476.8
75°	160.5	233.9	339.3	401.8	411.1
77.5°	117.6	191.0	291.9	313.2	314.8
80°	79.5	152.8	223.2	220.1	223.2
82.5°	51.9	114.7	140.5	157.5	158.9
85°	30.6	67.3	82.5	91.8	93.2
87.5°	15.2	22.9	29.0	30.6	33.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)