

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: P474464

Luminaire Tested: **24CZ2-45-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474464
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-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

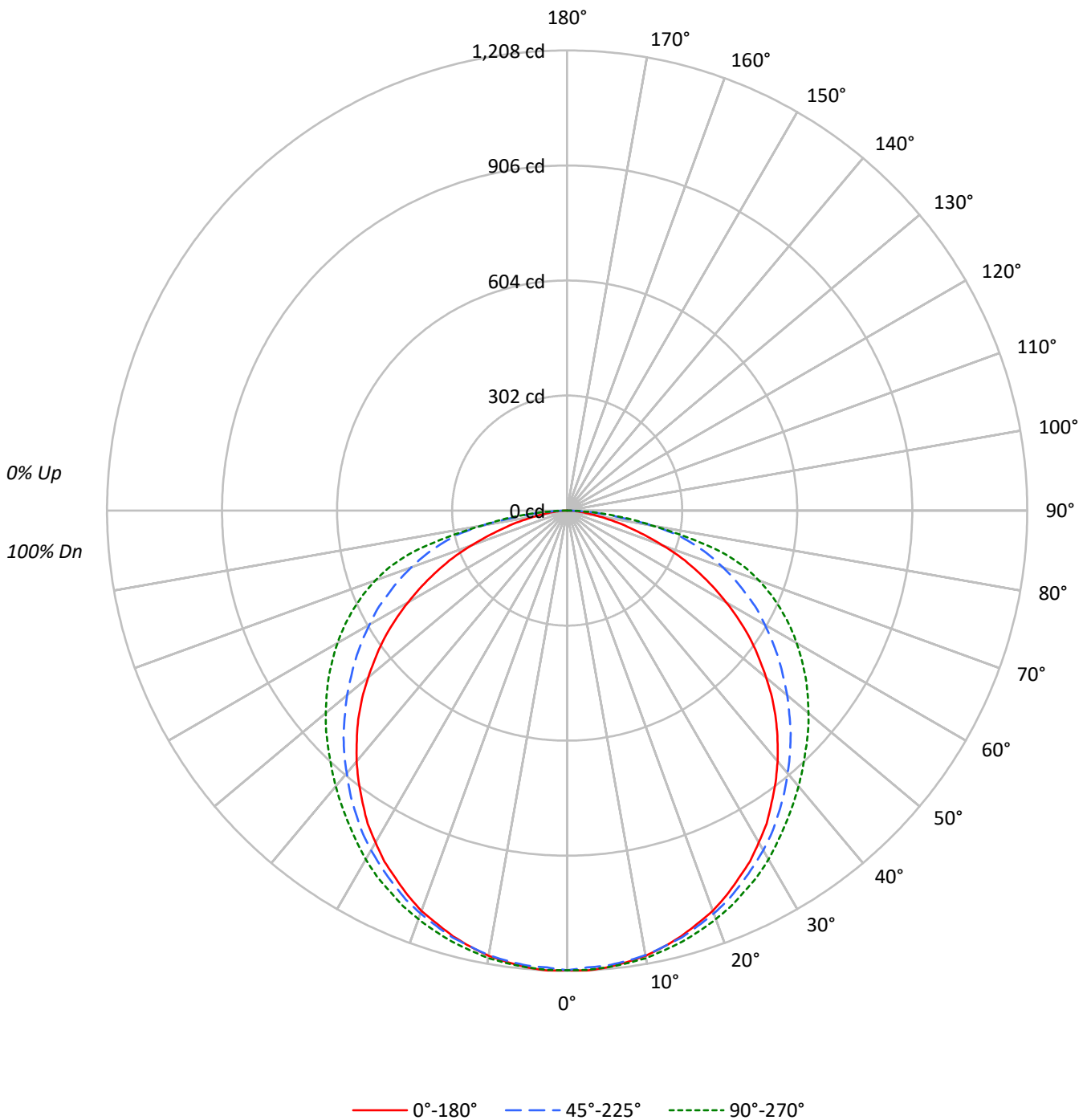
Lumens per Lamp: N/A
Luminaire Lumens: 3719.8 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1624	1624	1624
5°	1626	1619	1626
10°	1621	1619	1630
15°	1612	1616	1631
20°	1601	1612	1634
25°	1581	1605	1637
30°	1563	1599	1643
35°	1537	1591	1645
40°	1510	1581	1660
45°	1476	1579	1686
50°	1428	1578	1731
55°	1377	1589	1794
60°	1299	1613	1873
65°	1200	1651	1978
70°	1048	1709	2107
75°	850	1797	2178
80°	628	1762	1762
85°	482	1298	1465



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	3.1
10°-20°	328.3	8.8
20°-30°	499.8	13.4
30°-40°	606.9	16.3
40°-50°	641.2	17.2
50°-60°	605.0	16.3
60°-70°	503.0	13.5
70°-80°	330.9	8.9
80°-90°	90.2	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°	942.4	25.3
0°-40°	1549.3	41.7
0°-60°	2795.5	75.2
0°-90°	3719.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3719.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1207	1207	1207	1207	1207	
5°	1204	1204	1199	1204	1204	114
15°	1157	1159	1160	1171	1171	326
25°	1065	1071	1081	1100	1102	491
35°	936	947	969	994	1001	586
45°	776	791	830	870	886	597
55°	587	612	677	741	765	523
65°	377	420	519	595	621	373
75°	164	238	346	410	419	176
85°	31	69	84	94	95	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1206.9	1206.9	1206.9	1206.9	1206.9
2.5°	1208.5	1206.9	1200.6	1206.9	1206.9
5°	1203.8	1203.8	1199.0	1203.8	1203.8
7.5°	1196.0	1196.0	1192.8	1199.0	1199.0
10°	1186.6	1186.6	1185.1	1192.8	1192.8
12.5°	1172.7	1174.1	1172.7	1181.9	1181.9
15°	1157.0	1158.6	1160.2	1171.1	1171.1
17.5°	1136.9	1139.9	1143.1	1155.4	1157.0
20°	1118.2	1119.6	1125.8	1139.9	1141.5
22.5°	1093.2	1097.9	1105.7	1119.6	1124.4
25°	1065.1	1071.3	1080.8	1099.5	1102.5
27.5°	1038.7	1043.4	1055.8	1076.1	1082.4
30°	1006.0	1013.8	1029.3	1049.6	1057.4
32.5°	974.8	982.6	1001.3	1023.1	1029.3
35°	936.0	946.8	968.6	993.5	1001.3
37.5°	898.6	909.4	936.0	963.9	973.4
40°	859.6	872.0	900.2	932.8	945.2
42.5°	817.5	834.6	865.8	901.6	915.7
45°	775.5	791.2	830.0	870.4	886.1
47.5°	730.4	749.1	791.2	839.4	858.1
50°	682.1	705.5	753.8	806.7	827.0
52.5°	633.9	660.3	714.8	773.9	795.8
55°	587.0	612.0	677.4	741.3	764.6
57.5°	535.7	566.9	638.5	706.9	730.4
60°	482.7	517.0	599.5	671.1	696.1
62.5°	429.8	468.8	562.1	633.9	660.3
65°	376.9	420.5	518.6	594.9	621.4
67.5°	325.4	373.7	478.0	554.4	580.8
70°	266.3	327.0	434.4	509.2	535.7
72.5°	211.8	281.9	392.4	462.5	485.9
75°	163.5	238.3	345.7	409.5	418.9
77.5°	119.9	194.7	297.4	319.2	320.8
80°	81.0	155.7	227.4	224.2	227.4
82.5°	52.9	116.8	143.2	160.5	161.9
85°	31.2	68.6	84.1	93.5	94.9
87.5°	15.5	23.3	29.6	31.2	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)