

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: P474671

Luminaire Tested: **24CZ2-40HE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474671
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

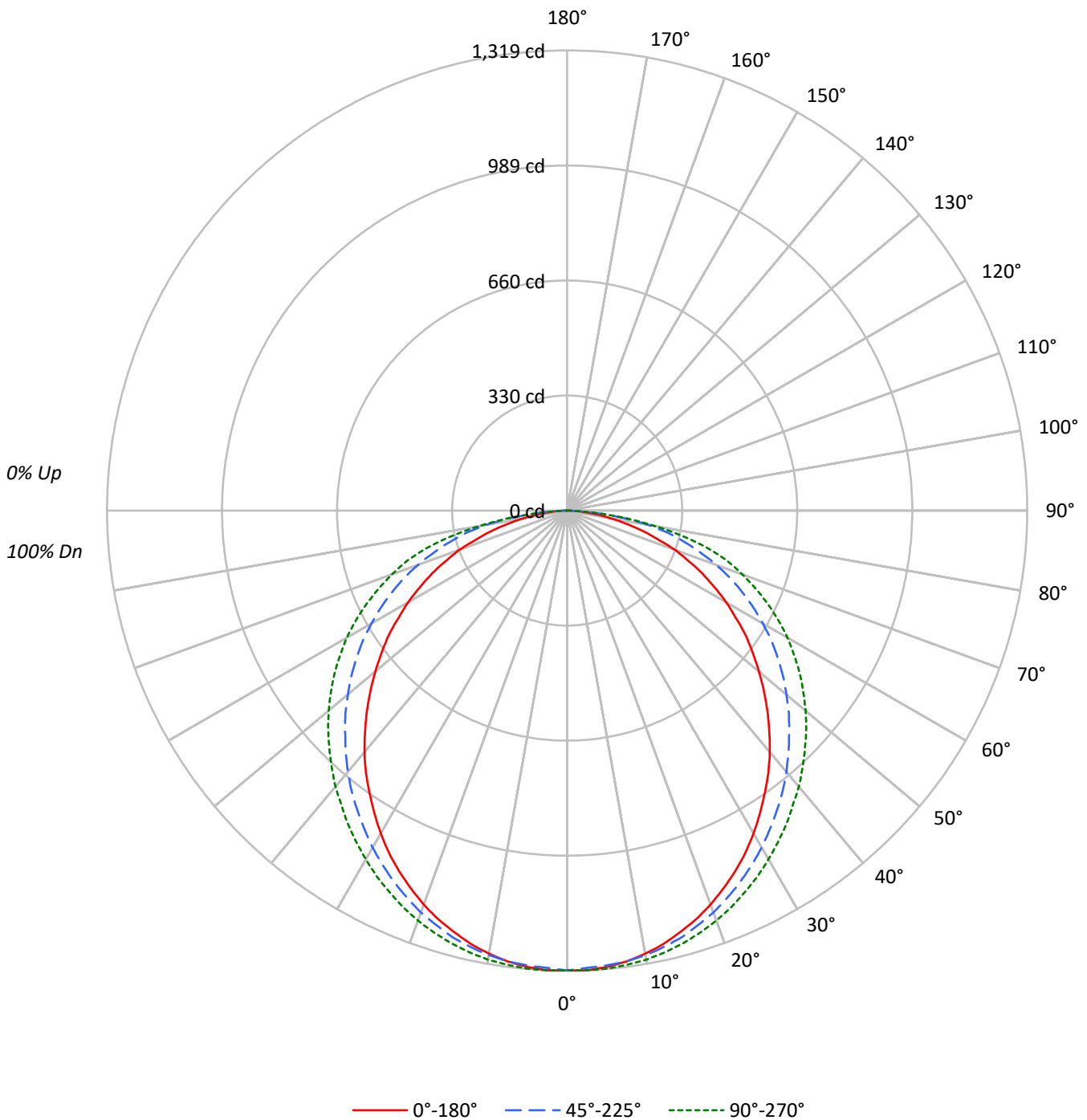
Lumens per Lamp: N/A
Luminaire Lumens: 4011.8 lumens
Efficiency: N/A
Efficacy: 130.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 30.7
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	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51		62	56	51		60	55	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	39		50	43	38		49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34		46	39	34		44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	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	25		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3546	3546	3546
5°	3546	3535	3560
10°	3524	3536	3571
15°	3485	3528	3577
20°	3441	3511	3581
25°	3385	3486	3581
30°	3320	3465	3587
35°	3245	3445	3600
40°	3175	3433	3629
45°	3088	3425	3669
50°	3005	3435	3735
55°	2935	3458	3819
60°	2835	3484	3926
65°	2722	3526	4045
70°	2582	3575	4205
75°	2312	3625	4345
80°	1946	3636	3944
85°	1445	2751	2594



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.9	3.1
10°-20°	357.9	8.9
20°-30°	541.8	13.5
30°-40°	655.4	16.3
40°-50°	691.8	17.2
50°-60°	652.4	16.3
60°-70°	537.8	13.4
70°-80°	352.8	8.8
80°-90°	97.0	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°	1024.5	25.5
0°-40°	1679.9	41.9
0°-60°	3024.1	75.4
0°-90°	4011.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4011.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1318	1318	1318	1318	1318	
5°	1313	1313	1309	1318	1318	125
15°	1251	1258	1266	1281	1284	353
25°	1140	1154	1174	1198	1206	525
35°	988	1013	1049	1084	1096	618
45°	811	848	900	948	964	626
55°	626	670	737	792	814	557
65°	428	479	554	613	635	422
75°	222	279	349	404	418	235
85°	47	81	89	86	84	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1317.8	1317.8	1317.8	1317.8	1317.8
2.5°	1319.0	1317.8	1312.0	1319.7	1319.0
5°	1312.6	1312.6	1308.8	1317.8	1317.8
7.5°	1303.7	1304.3	1303.0	1313.3	1313.3
10°	1289.6	1292.1	1294.0	1305.6	1306.9
12.5°	1272.9	1277.4	1281.2	1295.3	1296.6
15°	1251.1	1258.2	1266.5	1281.2	1283.8
17.5°	1228.7	1237.0	1246.0	1265.2	1268.4
20°	1201.7	1211.4	1226.1	1245.3	1250.5
22.5°	1171.6	1185.1	1200.5	1223.5	1230.0
25°	1140.2	1154.3	1174.2	1198.5	1206.2
27.5°	1106.3	1122.9	1145.3	1173.5	1181.9
30°	1068.4	1087.7	1115.2	1145.3	1154.3
32.5°	1028.7	1051.1	1081.9	1115.2	1125.5
35°	987.7	1013.3	1048.6	1084.5	1096.0
37.5°	947.3	972.9	1014.6	1052.4	1063.3
40°	903.7	931.9	977.4	1017.8	1033.2
42.5°	857.6	890.9	939.0	983.8	998.6
45°	811.4	848.0	899.9	947.9	964.0
47.5°	764.6	805.0	862.1	910.8	929.4
50°	717.8	760.8	820.4	873.0	892.2
52.5°	670.4	715.3	780.0	835.8	853.1
55°	625.6	669.8	737.1	792.2	814.0
57.5°	573.6	623.6	694.8	750.5	771.7
60°	526.8	575.6	647.3	706.3	729.4
62.5°	476.2	526.2	601.8	660.8	683.2
65°	427.5	478.8	553.8	612.7	635.2
67.5°	374.9	428.8	505.7	562.7	584.5
70°	328.2	378.8	454.4	512.7	534.5
72.5°	271.1	328.8	401.2	458.9	482.6
75°	222.4	279.4	348.7	403.8	417.9
77.5°	171.1	228.2	296.8	332.6	342.3
80°	125.6	179.5	234.6	253.8	254.5
82.5°	84.6	132.0	163.4	173.1	171.8
85°	46.8	80.8	89.1	86.5	84.0
87.5°	19.2	26.9	21.8	15.4	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)