

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: P475292

Luminaire Tested: **22CZ2-39HE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475292
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39HE-SQR-UNV-L840-CD1-U
Description: 2'X2' 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: 3869.4 lumens
Efficiency: N/A
Efficacy: 135.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

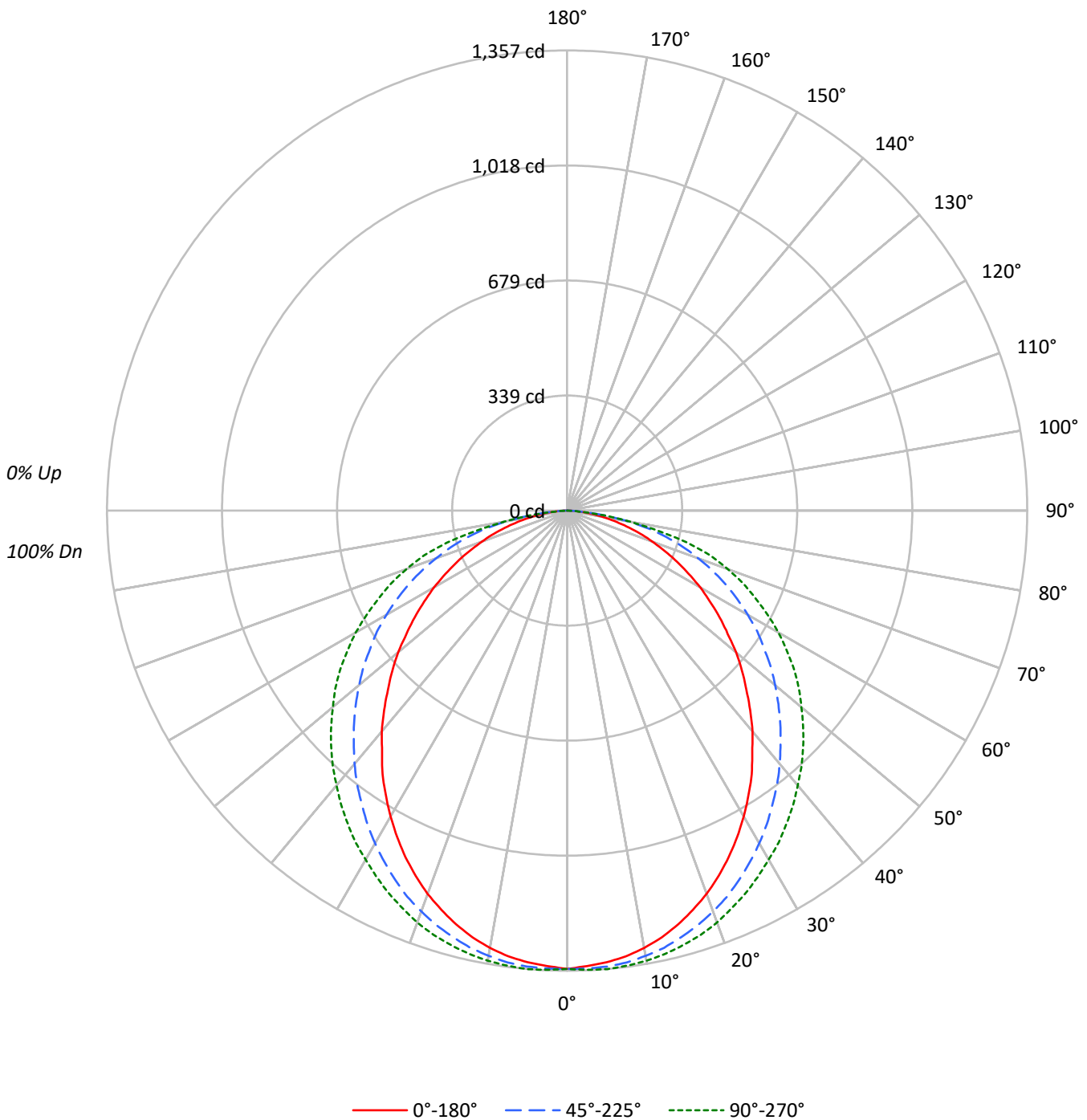
Input Watts (W): 28.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3637	3637	3637
5°	3612	3646	3666
10°	3578	3643	3683
15°	3520	3627	3694
20°	3445	3603	3702
25°	3348	3566	3697
30°	3236	3521	3692
35°	3119	3469	3705
40°	2987	3426	3717
45°	2844	3383	3746
50°	2722	3352	3775
55°	2576	3325	3834
60°	2441	3312	3875
65°	2280	3286	3905
70°	2094	3236	3959
75°	1891	3150	3818
80°	1623	2791	2875
85°	1306	1643	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.1	3.3
10°-20°	366.4	9.5
20°-30°	550.3	14.2
30°-40°	656.3	17.0
40°-50°	678.5	17.5
50°-60°	623.8	16.1
60°-70°	496.6	12.8
70°-80°	303.4	7.8
80°-90°	65.9	1.7
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°	1044.8	27.0
0°-40°	1701.1	44.0
0°-60°	3003.4	77.6
0°-90°	3869.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3869.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1352	1352	1352	1352	1352	
5°	1337	1341	1350	1356	1357	127
15°	1264	1278	1302	1320	1326	356
25°	1128	1155	1201	1234	1245	519
35°	949	990	1056	1111	1128	592
45°	747	801	889	961	984	578
55°	549	610	709	790	817	491
65°	358	419	516	588	613	355
75°	182	235	303	356	367	194
85°	42	51	53	46	42	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1351.6	1351.6	1351.6	1351.6	1351.6
2.5°	1344.3	1346.1	1351.6	1355.5	1355.5
5°	1337.0	1340.6	1349.8	1355.5	1357.3
7.5°	1326.0	1331.5	1344.3	1351.6	1353.6
10°	1309.5	1316.9	1333.3	1344.3	1348.0
12.5°	1289.2	1300.2	1320.5	1335.2	1338.8
15°	1263.6	1278.2	1302.0	1320.5	1326.0
17.5°	1234.2	1252.4	1281.9	1304.1	1311.4
20°	1202.9	1221.3	1258.1	1283.7	1292.9
22.5°	1166.3	1190.1	1232.3	1261.8	1269.1
25°	1127.7	1155.1	1201.0	1234.2	1245.1
27.5°	1085.4	1118.5	1168.1	1208.5	1217.7
30°	1041.3	1076.2	1133.2	1177.2	1188.2
32.5°	995.4	1035.8	1096.4	1146.0	1160.8
35°	949.4	989.9	1055.9	1111.2	1127.7
37.5°	896.2	944.0	1017.5	1074.4	1094.5
40°	850.3	896.2	975.2	1037.6	1058.0
42.5°	798.9	848.4	931.2	999.0	1023.0
45°	747.4	800.7	888.9	960.6	984.4
47.5°	699.7	752.9	844.8	920.2	944.0
50°	650.1	705.2	800.7	877.9	901.7
52.5°	596.9	657.4	756.6	833.8	861.4
55°	549.1	609.7	708.8	789.7	817.3
57.5°	499.5	561.9	664.9	742.0	767.8
60°	453.6	514.1	615.3	690.5	720.0
62.5°	404.0	466.4	565.6	639.1	666.8
65°	358.1	418.8	516.0	587.7	613.3
67.5°	312.1	372.9	464.6	532.6	561.9
70°	266.2	327.0	411.3	477.6	503.2
72.5°	226.0	279.2	359.9	420.7	444.4
75°	181.9	235.1	303.0	356.2	367.2
77.5°	141.4	189.2	246.1	269.9	273.7
80°	104.7	141.4	180.1	185.5	185.5
82.5°	69.7	97.3	112.0	113.8	112.0
85°	42.3	51.4	53.2	45.9	42.3
87.5°	14.6	14.6	9.1	5.5	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)