

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: P295021

Luminaire Tested: **24CZ2-35HE-HRP-UNV-L940-CD1-U**

Issue Date: 12/2/2019

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P295021
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35HE-HRP-UNV-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2377.5 lumens
Efficiency: N/A
Efficacy: 88.4 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

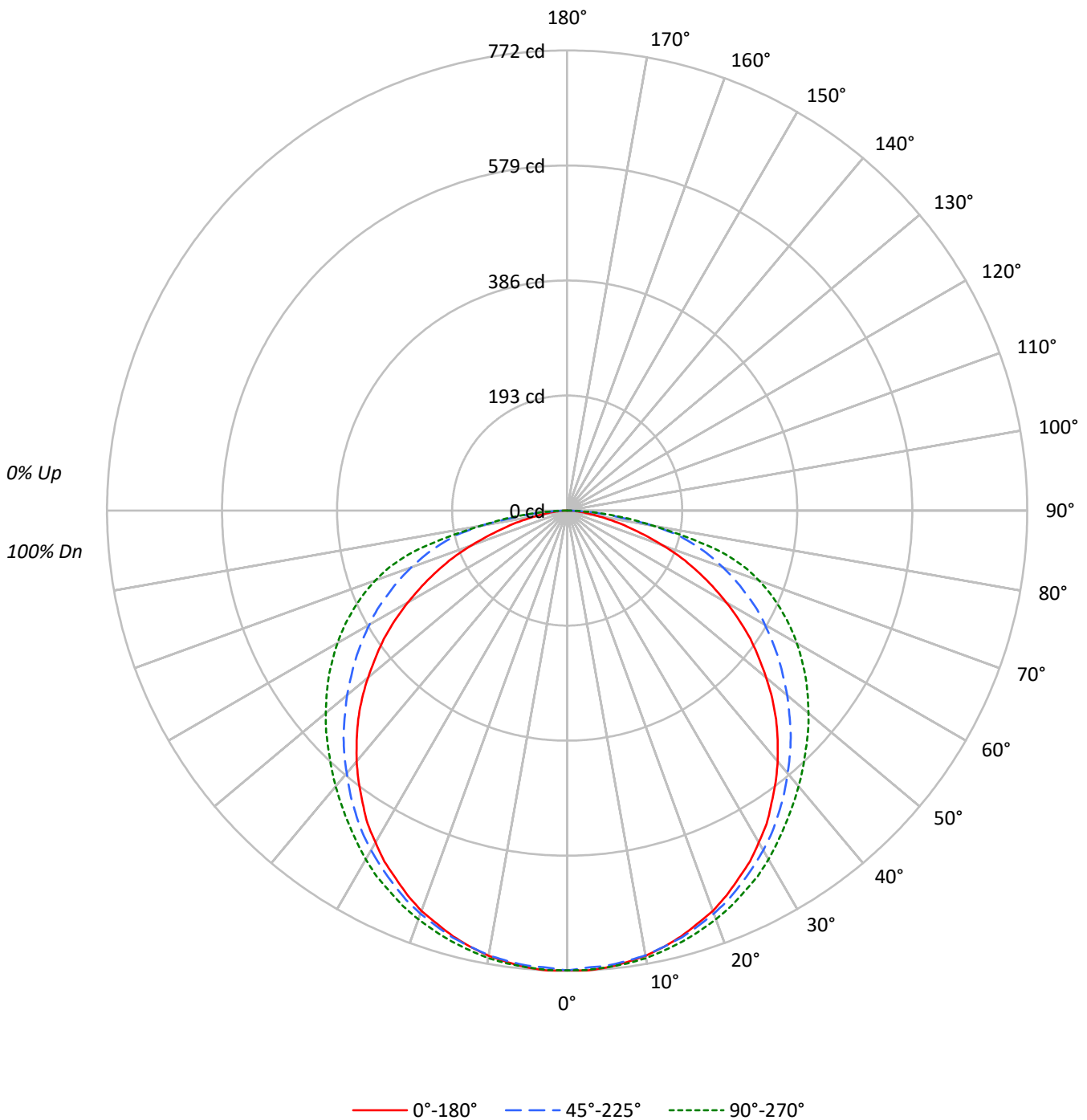
Input Watts (W): 26.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P295021

CATALOG NUMBER: 24CZ2-35HE-HRP-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P295021

CATALOG NUMBER: 24CZ2-35HE-HRP-UNV-L940-CD1-U

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°	1038	1038	1038
5°	1039	1035	1039
10°	1036	1035	1042
15°	1030	1033	1043
20°	1023	1030	1045
25°	1011	1026	1046
30°	999	1022	1050
35°	983	1017	1051
40°	965	1010	1061
45°	943	1009	1078
50°	913	1008	1106
55°	880	1016	1146
60°	830	1031	1197
65°	767	1055	1264
70°	670	1092	1347
75°	543	1149	1392
80°	401	1126	1126
85°	307	829	937



TEST NUMBER: P295021

CATALOG NUMBER: 24CZ2-35HE-HRP-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.1	3.1
10°-20°	209.8	8.8
20°-30°	319.5	13.4
30°-40°	387.9	16.3
40°-50°	409.8	17.2
50°-60°	386.7	16.3
60°-70°	321.5	13.5
70°-80°	211.5	8.9
80°-90°	57.7	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°	602.4	25.3
0°-40°	990.3	41.7
0°-60°	1786.8	75.2
0°-90°	2377.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2377.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	771	771	771	771	771	
5°	769	769	766	769	769	73
15°	740	740	742	748	748	209
25°	681	685	691	703	705	314
35°	598	605	619	635	640	374
45°	496	506	530	556	566	382
55°	375	391	433	474	489	334
65°	241	269	331	380	397	238
75°	104	152	221	262	268	113
85°	20	44	54	60	61	24
90°	0	0	0	0	0	



TEST NUMBER: P295021

CATALOG NUMBER: 24CZ2-35HE-HRP-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	771.4	771.4	771.4	771.4	771.4
2.5°	772.4	771.4	767.4	771.4	771.4
5°	769.4	769.4	766.4	769.4	769.4
7.5°	764.4	764.4	762.4	766.4	766.4
10°	758.4	758.4	757.5	762.4	762.4
12.5°	749.5	750.5	749.5	755.5	755.5
15°	739.5	740.5	741.5	748.5	748.5
17.5°	726.6	728.6	730.6	738.5	739.5
20°	714.7	715.6	719.6	728.6	729.6
22.5°	698.7	701.7	706.7	715.6	718.6
25°	680.8	684.8	690.8	702.7	704.7
27.5°	663.9	666.9	674.8	687.8	691.8
30°	643.0	648.0	657.9	670.9	675.8
32.5°	623.1	628.1	640.0	653.9	657.9
35°	598.2	605.2	619.1	635.0	640.0
37.5°	574.3	581.3	598.2	616.1	622.1
40°	549.4	557.4	575.3	596.2	604.2
42.5°	522.6	533.5	553.4	576.3	585.3
45°	495.7	505.6	530.5	556.4	566.3
47.5°	466.8	478.8	505.6	536.5	548.4
50°	436.0	450.9	481.7	515.6	528.5
52.5°	405.1	422.0	456.9	494.7	508.6
55°	375.2	391.2	433.0	473.8	488.7
57.5°	342.4	362.3	408.1	451.9	466.8
60°	308.6	330.5	383.2	429.0	444.9
62.5°	274.7	299.6	359.3	405.1	422.0
65°	240.9	268.7	331.4	380.2	397.1
67.5°	208.0	238.9	305.6	354.3	371.3
70°	170.2	209.0	277.7	325.5	342.4
72.5°	135.4	180.2	250.8	295.6	310.5
75°	104.5	152.3	221.0	261.8	267.7
77.5°	76.6	124.4	190.1	204.0	205.0
80°	51.8	99.5	145.3	143.3	145.3
82.5°	33.8	74.7	91.6	102.5	103.5
85°	19.9	43.8	53.7	59.7	60.7
87.5°	10.0	14.9	18.9	19.9	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)