

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: P294821

Luminaire Tested: **14CZ2-60HE-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: P294821
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-60HE-HRP-UNV-L940-CD1-U
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (196) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3901.7 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

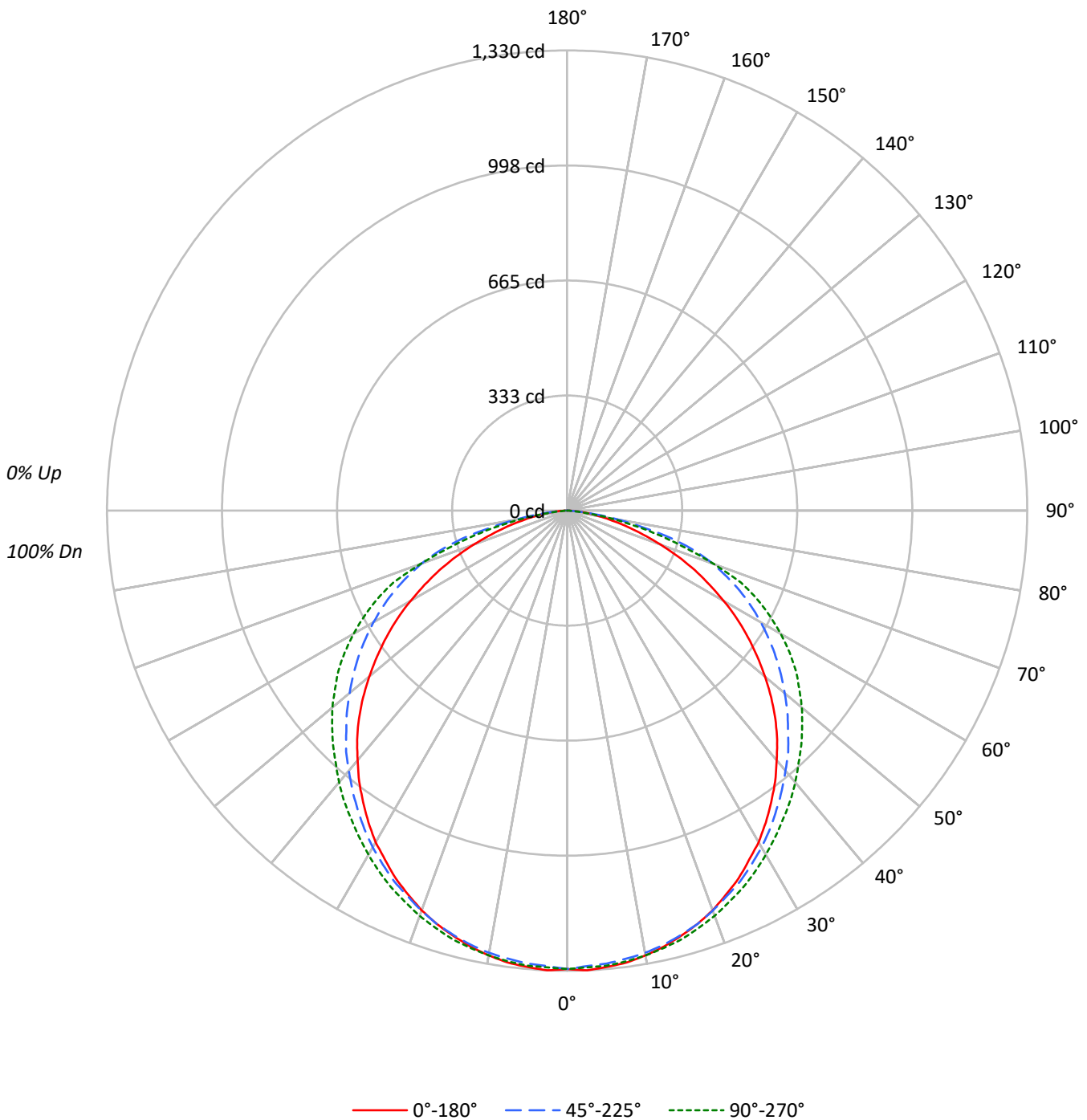
Input Watts (W): 48.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3566	3566	3566
5°	3576	3549	3566
10°	3567	3547	3567
15°	3545	3538	3572
20°	3520	3524	3570
25°	3483	3512	3570
30°	3439	3492	3568
35°	3377	3466	3575
40°	3310	3448	3603
45°	3240	3436	3642
50°	3128	3436	3708
55°	2993	3453	3788
60°	2813	3480	3836
65°	2593	3515	3859
70°	2259	3523	3552
75°	1862	3278	2871
80°	1464	2357	1920
85°	1136	908	454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.4	3.2
10°-20°	360.0	9.2
20°-30°	546.6	14.0
30°-40°	662.3	17.0
40°-50°	697.9	17.9
50°-60°	651.6	16.7
60°-70°	520.7	13.3
70°-80°	286.5	7.3
80°-90°	50.6	1.3
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°	1032.0	26.5
0°-40°	1694.4	43.4
0°-60°	3043.9	78.0
0°-90°	3901.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3901.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1325	1325	1325	1325	1325	
5°	1324	1320	1314	1323	1320	126
15°	1272	1272	1270	1282	1282	359
25°	1173	1175	1183	1200	1202	540
35°	1028	1038	1055	1082	1088	643
45°	852	867	903	944	957	655
55°	638	670	736	788	807	570
65°	407	459	552	598	606	401
75°	179	256	315	283	276	193
85°	37	47	29	18	15	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1325.0	1325.0	1325.0	1325.0	1325.0
2.5°	1330.0	1326.3	1317.7	1325.0	1321.4
5°	1323.8	1320.1	1314.0	1322.6	1320.1
7.5°	1317.7	1312.8	1306.6	1316.5	1314.0
10°	1305.4	1301.7	1298.1	1306.6	1305.4
12.5°	1290.7	1289.5	1285.8	1295.6	1294.4
15°	1272.3	1272.3	1269.8	1282.1	1282.1
17.5°	1252.7	1251.4	1252.7	1266.2	1264.9
20°	1229.3	1229.3	1230.6	1246.5	1246.5
22.5°	1201.1	1202.4	1206.0	1225.7	1224.4
25°	1172.9	1175.4	1182.7	1199.9	1202.4
27.5°	1138.6	1144.7	1153.3	1174.1	1176.6
30°	1106.7	1110.3	1123.8	1143.5	1148.4
32.5°	1068.6	1076.0	1090.7	1112.8	1118.9
35°	1028.1	1038.0	1055.1	1082.1	1088.3
37.5°	987.6	996.2	1019.5	1047.8	1058.8
40°	942.3	957.0	981.5	1013.4	1025.7
42.5°	898.1	912.8	945.9	979.1	990.1
45°	851.5	867.4	903.0	943.5	957.0
47.5°	799.9	818.3	863.7	906.7	921.4
50°	747.2	770.5	820.8	868.6	885.8
52.5°	692.0	721.4	779.1	829.4	845.3
55°	638.0	669.9	736.1	787.7	807.3
57.5°	582.8	617.1	692.0	750.9	761.9
60°	522.7	564.4	646.6	698.1	712.8
62.5°	463.8	511.6	600.0	649.0	661.3
65°	407.3	458.9	552.1	597.5	606.1
67.5°	346.0	407.3	499.3	541.1	543.5
70°	287.1	358.3	447.8	467.4	451.5
72.5°	229.4	305.5	387.7	371.7	358.3
75°	179.1	256.4	315.3	283.4	276.1
77.5°	132.5	209.8	225.7	208.6	195.1
80°	94.5	165.6	152.1	130.1	123.9
82.5°	65.0	104.3	83.4	65.0	56.4
85°	36.8	46.6	29.4	18.4	14.7
87.5°	15.9	11.0	6.1	4.9	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)