

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: P291452

Luminaire Tested: **14GR-LD5-28-A19/156-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P291452
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33288)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-28-A19/156-UNV-L93050-W2A1-U-4500K
Description: GRLED 1x4 TUNABLE WHITE TROFFER
WITH A19/156 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2616.0 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.23 / 1.18
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

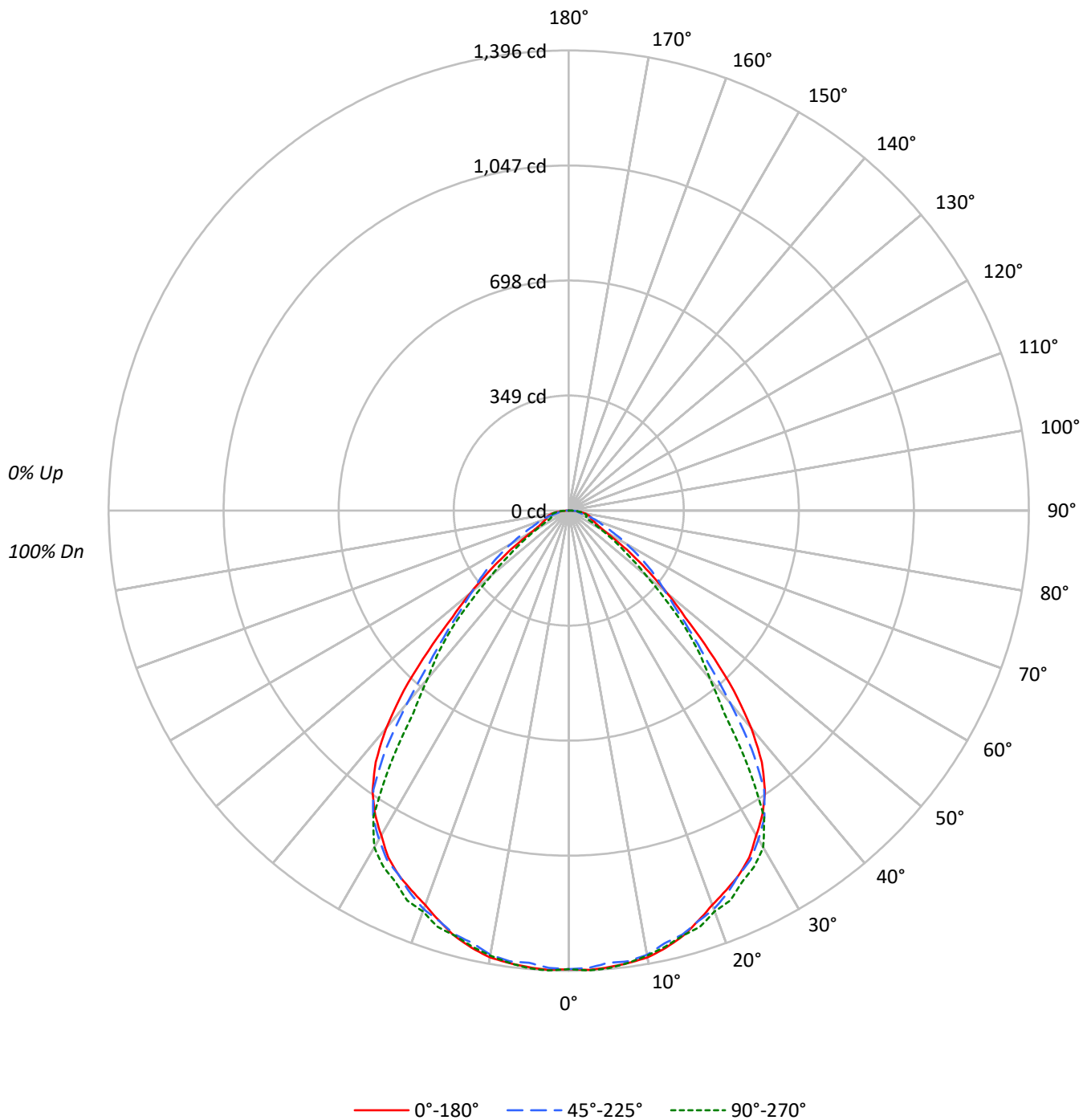
Input Watts (W): 23.157
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	111	107	104	100	108	105	102	99	101	98	96		97	95	93		93
2	103	96	90	86	100	94	89	85	91	87	83		88	84	81		85
3	95	87	80	74	93	85	79	74	82	77	73		80	75	71		77
4	89	79	71	65	87	77	70	65	75	69	64		73	68	63		71
5	83	71	64	58	81	70	63	58	68	62	57		67	61	57		65
6	77	65	58	52	75	64	57	52	63	56	51		61	55	51		60
7	72	60	52	47	70	59	52	47	58	51	46		56	51	46		55
8	67	55	48	43	66	55	47	42	53	47	42		52	46	42		51
9	63	51	44	39	62	51	44	39	50	43	39		49	43	38		48
10	60	48	40	36	58	47	40	36	46	40	35		45	39	35		44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3743	3743	3743
5°	3756	3720	3764
10°	3762	3739	3745
15°	3724	3710	3719
20°	3646	3685	3706
25°	3624	3622	3691
30°	3535	3578	3666
35°	3409	3395	3120
40°	3027	2672	2339
45°	2297	1999	1891
50°	1629	1600	1284
55°	1115	1365	882
60°	690	1089	590
65°	568	839	427
70°	566	730	438
75°	679	523	585
80°	779	482	733
85°	741	849	831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.0	5.0
10°-20°	376.7	14.4
20°-30°	566.5	21.7
30°-40°	617.6	23.6
40°-50°	432.5	16.5
50°-60°	244.8	9.4
60°-70°	133.9	5.1
70°-80°	81.2	3.1
80°-90°	30.8	1.2
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°	1075.2	41.1
0°-40°	1692.8	64.7
0°-60°	2370.1	90.6
0°-90°	2616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2616.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1390	1388	1377	1394	1394	132
15°	1337	1333	1332	1351	1335	376
25°	1220	1223	1220	1248	1243	561
35°	1038	1033	1034	981	950	639
45°	604	630	525	519	497	469
55°	238	284	291	289	188	217
65°	89	147	132	166	67	92
75°	65	94	50	99	56	68
85°	24	39	28	34	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1391.1	1391.1	1391.1	1391.1	1391.1
2.5°	1394.7	1392.9	1388.7	1397.1	1396.5
5°	1390.5	1388.1	1377.3	1393.5	1393.5
7.5°	1384.5	1378.5	1379.1	1388.1	1383.9
10°	1376.7	1366.5	1368.3	1370.7	1370.7
12.5°	1358.8	1349.2	1344.4	1352.2	1354.6
15°	1336.6	1333.0	1331.8	1351.0	1334.8
17.5°	1305.5	1313.2	1306.1	1321.6	1324.0
20°	1273.1	1288.1	1286.9	1297.7	1294.1
22.5°	1246.8	1256.3	1256.3	1269.5	1280.3
25°	1220.4	1222.8	1219.8	1248.0	1243.2
27.5°	1186.3	1184.5	1194.1	1208.4	1218.0
30°	1137.8	1138.4	1151.6	1170.7	1179.7
32.5°	1093.5	1088.1	1104.2	1112.6	1103.0
35°	1037.8	1033.0	1033.6	980.9	949.7
37.5°	961.7	965.9	910.8	814.4	773.7
40°	861.7	870.1	760.5	688.7	665.9
42.5°	740.8	743.2	623.4	600.0	585.1
45°	603.6	630.0	525.2	518.6	497.0
47.5°	478.5	527.6	440.1	444.3	392.8
50°	389.2	438.3	382.1	383.9	306.6
52.5°	307.8	355.7	337.1	331.8	240.7
55°	237.7	284.4	291.0	288.6	188.0
57.5°	174.9	225.2	244.3	253.3	144.9
60°	128.2	183.8	202.4	220.4	109.6
62.5°	101.8	159.3	165.9	192.2	85.0
65°	89.2	146.7	131.7	166.5	67.1
67.5°	79.6	139.5	107.2	147.3	58.7
70°	71.9	125.8	92.8	131.7	55.7
72.5°	71.9	110.2	73.1	116.8	56.3
75°	65.3	94.0	50.3	98.8	56.3
77.5°	58.1	80.2	37.7	80.2	52.7
80°	50.3	62.9	31.1	61.7	47.3
82.5°	37.1	47.3	26.9	46.1	38.3
85°	24.0	38.9	27.5	33.5	26.9
87.5°	11.4	19.8	17.4	16.8	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)