

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: NEO-RAY

Report Number: P199490

Luminaire Tested: **S124-DIW-U2-2-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199490
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28061)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-U2-2-30-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-3000K, NO LENS
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

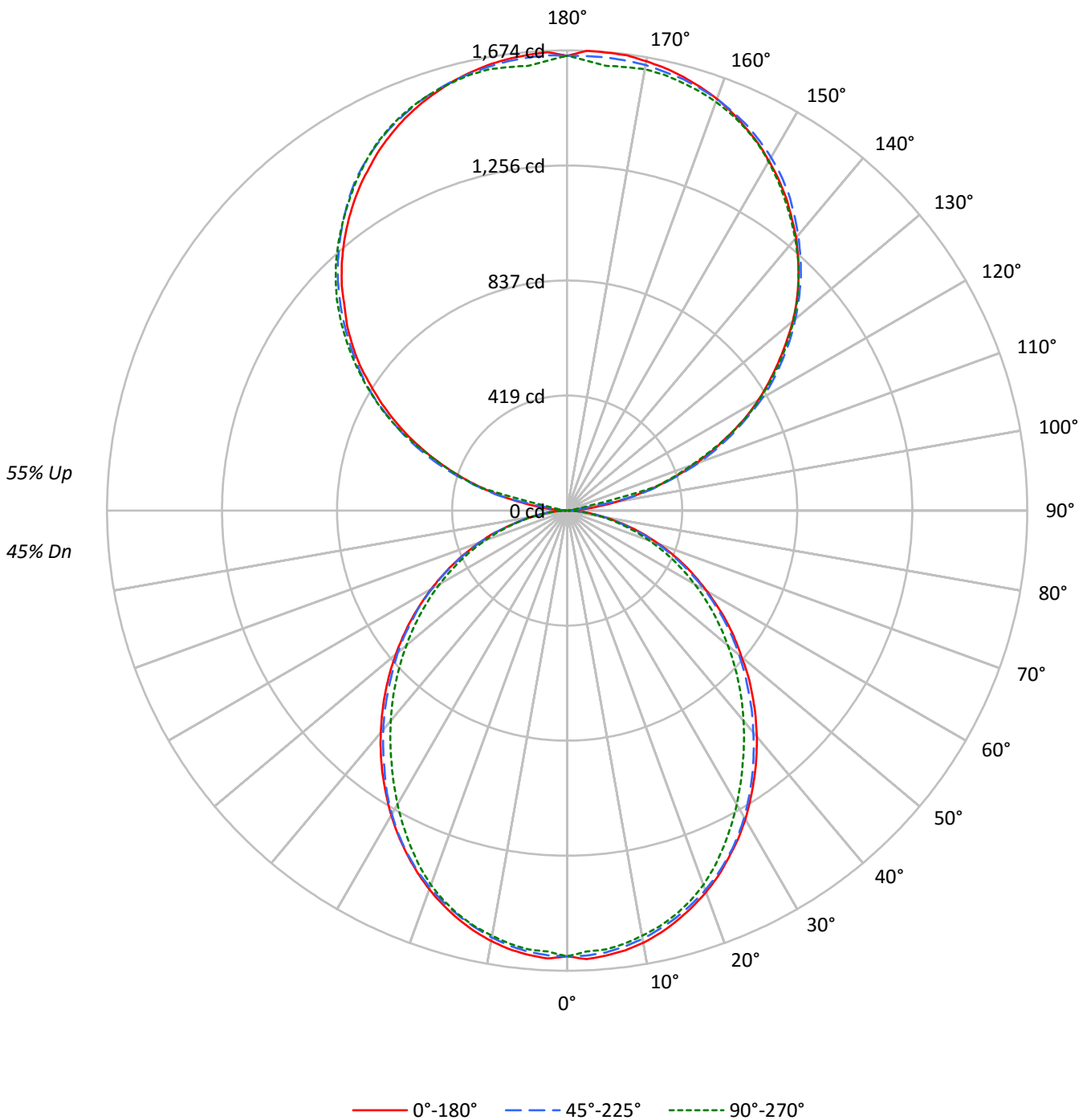
Lumens per Lamp: N/A
Luminaire Lumens: 8980.5 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 80.5
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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	89	85	88	85	82	79	71	68	66	58	56	54	45	44	43	38
2	88	81	75	70	80	74	69	65	62	58	55	51	48	46	40	38	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	74	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23
5	68	56	48	42	62	52	45	39	43	38	34	36	32	29	29	26	24	20
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	26	23	21	18
7	57	45	37	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	28	49	38	31	27	32	27	23	27	23	20	22	19	17	14
9	50	38	30	25	45	35	28	24	30	24	21	25	21	18	20	17	15	13
10	46	34	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12822	12822	12822
5°	12799	11583	12776
10°	12618	10523	12564
15°	12344	9577	12282
20°	12030	8651	11942
25°	11647	7714	11540
30°	11246	6832	11102
35°	10768	6019	10617
40°	10287	5299	10109
45°	9770	4638	9578
50°	9185	4014	9022
55°	8663	3432	8435
60°	8013	2876	7785
65°	7371	2333	7080
70°	6551	1795	6244
75°	5509	1262	5109
80°	4138	768	3875
85°	2430	340	2302



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.6	1.7
10°-20°	430.3	4.8
20°-30°	630.4	7.0
30°-40°	722.5	8.0
40°-50°	712.3	7.9
50°-60°	614.0	6.8
60°-70°	447.7	5.0
70°-80°	244.1	2.7
80°-90°	64.1	0.7
90°-100°	42.3	0.5
100°-110°	334.5	3.7
110°-120°	647.2	7.2
120°-130°	841.6	9.4
130°-140°	913.6	10.2
140°-150°	864.5	9.6
150°-160°	705.2	7.9
160°-170°	456.5	5.1
170°-180°	157.1	1.7
0°-30°	1213.4	13.5
0°-40°	1935.9	21.6
0°-60°	3262.1	36.3
0°-90°	4018.0	44.7
90°-120°	1024.0	11.4
90°-150°	3643.7	40.6
90°-180°	4962.0	55.3
0°-180°	8980.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1621	1621	1621	1621	1621	
5°	1625	1614	1603	1612	1622	154
15°	1545	1533	1522	1525	1537	435
25°	1392	1388	1348	1376	1379	641
35°	1187	1174	1114	1158	1170	743
45°	954	934	881	918	935	736
55°	711	699	649	684	692	634
65°	472	461	425	449	453	466
75°	242	233	215	224	224	257
85°	55	56	52	53	52	62
90°	2	4	3	4	2	6
95°	58	15	16	16	52	73
105°	333	342	328	334	324	352
115°	650	667	653	658	633	644
125°	937	957	945	935	920	838
135°	1190	1203	1191	1179	1160	917
145°	1389	1406	1381	1385	1359	868
155°	1537	1547	1534	1531	1512	709
165°	1633	1625	1612	1616	1615	461
175°	1672	1655	1624	1654	1663	159
180°	1655	1655	1655	1655	1655	



TEST NUMBER: P199490

CATALOG NUMBER: S124-DIW-U2-2-30-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3
2.5°	1633.1	1614.4	1620.3	1616.4	1605.6	1616.4	1619.3	1613.5	1631.1
5°	1625.2	1607.6	1613.5	1607.6	1602.7	1606.6	1611.5	1604.6	1622.3
7.5°	1613.5	1594.8	1599.7	1594.8	1589.9	1593.8	1596.8	1590.9	1609.5
10°	1596.8	1577.2	1582.1	1576.2	1570.3	1574.2	1577.2	1571.3	1589.9
12.5°	1573.3	1554.6	1558.6	1554.6	1549.7	1550.7	1552.7	1546.8	1566.4
15°	1544.8	1526.2	1533.1	1529.2	1522.3	1526.2	1525.2	1518.4	1537.0
17.5°	1512.5	1494.8	1502.7	1498.8	1489.0	1494.8	1494.8	1484.1	1503.7
20°	1477.2	1458.6	1469.4	1459.6	1448.8	1454.7	1459.6	1446.8	1466.4
22.5°	1438.0	1418.4	1431.1	1413.5	1401.7	1408.6	1420.3	1406.6	1424.3
25°	1391.9	1376.2	1388.0	1363.5	1347.8	1357.6	1376.2	1362.5	1379.2
27.5°	1346.8	1331.1	1340.9	1313.5	1291.9	1304.7	1328.2	1316.4	1331.1
30°	1296.8	1284.1	1289.0	1256.7	1234.1	1247.8	1275.3	1268.4	1280.2
32.5°	1241.9	1232.1	1232.1	1197.8	1174.3	1190.0	1219.4	1217.4	1225.3
35°	1187.1	1181.2	1174.3	1137.1	1114.5	1129.2	1157.6	1165.5	1170.4
37.5°	1131.2	1127.3	1114.5	1078.2	1056.7	1072.4	1098.8	1110.6	1113.5
40°	1073.3	1071.4	1053.7	1019.4	997.9	1013.6	1041.0	1055.7	1054.7
42.5°	1014.5	1016.5	994.9	961.6	940.0	955.7	981.2	1000.8	995.9
45°	953.8	959.6	934.2	903.8	881.2	897.9	918.5	943.0	935.1
47.5°	894.9	901.8	875.3	844.0	822.4	840.1	860.6	887.1	875.3
50°	828.3	842.0	816.5	785.2	763.6	780.3	804.8	827.3	813.6
52.5°	770.5	780.3	757.7	727.3	706.7	720.5	745.0	767.5	752.8
55°	710.7	721.4	698.9	668.5	648.9	662.6	684.2	706.7	692.0
57.5°	647.9	658.7	638.1	610.7	592.1	606.8	629.3	645.0	631.3
60°	587.2	600.9	578.3	551.9	536.2	547.9	565.6	584.2	570.5
62.5°	528.3	541.1	519.5	495.0	480.3	491.1	509.7	524.4	511.7
65°	471.5	479.3	460.7	438.2	425.4	432.3	448.9	465.6	452.9
67.5°	413.7	421.5	402.9	383.3	370.5	377.4	391.1	406.8	395.0
70°	354.8	361.7	346.0	328.4	317.6	324.5	337.2	349.0	338.2
72.5°	299.0	303.9	289.2	275.4	267.6	272.5	281.3	292.1	287.2
75°	242.1	248.0	233.3	221.5	214.7	216.6	223.5	232.3	224.5
77.5°	188.2	194.1	182.3	173.5	169.6	170.6	175.5	182.3	172.5
80°	138.2	143.1	136.3	128.4	124.5	126.4	129.4	133.3	129.4
82.5°	93.1	98.0	93.1	88.2	85.3	87.2	88.2	90.2	87.2
85°	54.9	58.8	55.9	52.9	52.0	52.0	52.9	54.9	52.0
87.5°	24.5	27.4	25.5	23.5	20.6	21.6	22.5	24.5	22.5
90°	2.0	4.9	3.9	2.9	2.9	2.9	3.9	4.9	2.0
92.5°	18.6	9.8	9.8	9.8	9.8	9.8	9.8	10.8	12.7
95°	57.8	37.2	14.7	15.7	15.7	15.7	15.7	25.5	52.0
97.5°	112.7	131.4	28.4	18.6	18.6	18.6	28.4	124.5	104.9
100°	178.4	196.0	143.1	45.1	33.3	42.1	125.5	185.3	169.6
102.5°	251.9	274.5	263.7	148.0	85.3	126.4	255.8	262.7	245.1
105°	333.3	352.9	342.1	347.0	328.4	334.3	334.3	338.2	323.5
107.5°	413.7	430.3	424.4	420.5	405.8	409.7	419.5	417.6	400.9
110°	494.0	510.7	510.7	498.0	480.3	487.2	502.9	493.1	479.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	574.4	587.2	590.1	583.2	562.6	572.5	581.3	565.6	556.8
115°	649.9	668.5	666.6	667.5	652.8	652.8	657.7	646.0	633.2
117.5°	731.2	745.0	742.0	743.0	733.2	729.3	728.3	720.5	706.7
120°	802.8	818.5	820.4	813.6	806.7	798.9	803.8	793.0	778.3
122.5°	870.4	888.1	891.0	884.2	877.3	868.5	872.4	860.6	846.9
125°	937.1	956.7	956.7	951.8	944.9	936.1	935.1	925.3	920.4
127.5°	1003.8	1026.3	1022.4	1017.5	1011.6	1001.8	996.9	991.0	983.2
130°	1071.4	1087.1	1083.2	1079.2	1075.3	1063.5	1059.6	1053.7	1044.9
132.5°	1133.1	1142.0	1143.9	1136.1	1136.1	1121.4	1120.4	1113.5	1097.9
135°	1190.0	1198.8	1202.7	1191.0	1191.0	1176.3	1179.2	1169.4	1159.6
137.5°	1243.9	1250.8	1255.7	1241.9	1242.9	1229.2	1234.1	1217.4	1213.5
140°	1295.9	1298.8	1307.6	1292.9	1291.0	1279.2	1286.1	1269.4	1264.5
142.5°	1341.9	1345.9	1356.6	1340.9	1336.0	1327.2	1336.0	1315.5	1312.5
145°	1389.0	1390.0	1405.6	1387.0	1381.1	1374.3	1385.1	1360.6	1358.6
147.5°	1430.2	1428.2	1446.8	1431.1	1425.2	1418.4	1430.2	1401.7	1401.7
150°	1468.4	1466.4	1484.1	1471.3	1465.4	1459.6	1466.4	1440.0	1440.0
152.5°	1505.6	1498.8	1516.4	1505.6	1503.7	1494.8	1500.7	1475.2	1479.2
155°	1537.0	1530.1	1546.8	1538.0	1534.1	1527.2	1531.1	1506.6	1512.5
157.5°	1567.4	1556.6	1571.3	1567.4	1560.5	1556.6	1556.6	1537.0	1543.9
160°	1593.8	1581.1	1593.8	1588.0	1582.1	1577.2	1581.1	1561.5	1570.3
162.5°	1615.4	1603.7	1610.5	1602.7	1599.7	1591.9	1599.7	1584.0	1593.8
165°	1633.1	1620.3	1625.2	1614.4	1612.5	1606.6	1616.4	1605.6	1615.4
167.5°	1648.7	1637.0	1635.0	1624.2	1624.2	1616.4	1628.2	1622.3	1632.1
170°	1659.5	1649.7	1645.8	1630.1	1630.1	1623.3	1639.9	1635.0	1646.8
172.5°	1670.3	1657.6	1650.7	1634.0	1627.2	1628.2	1648.7	1644.8	1656.6
175°	1672.3	1662.5	1654.6	1637.0	1624.2	1633.1	1653.6	1654.6	1663.4
177.5°	1674.2	1664.4	1654.6	1639.9	1638.0	1636.0	1657.6	1656.6	1669.3
180°	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6

(END OF REPORT)