

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: P199493

Luminaire Tested: **S124-DIW-U2-2-40-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199493
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28062)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-U2-2-40-0048-1D-UDD-1-5-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-4000K, SATIN WHITE DIFFUSER
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

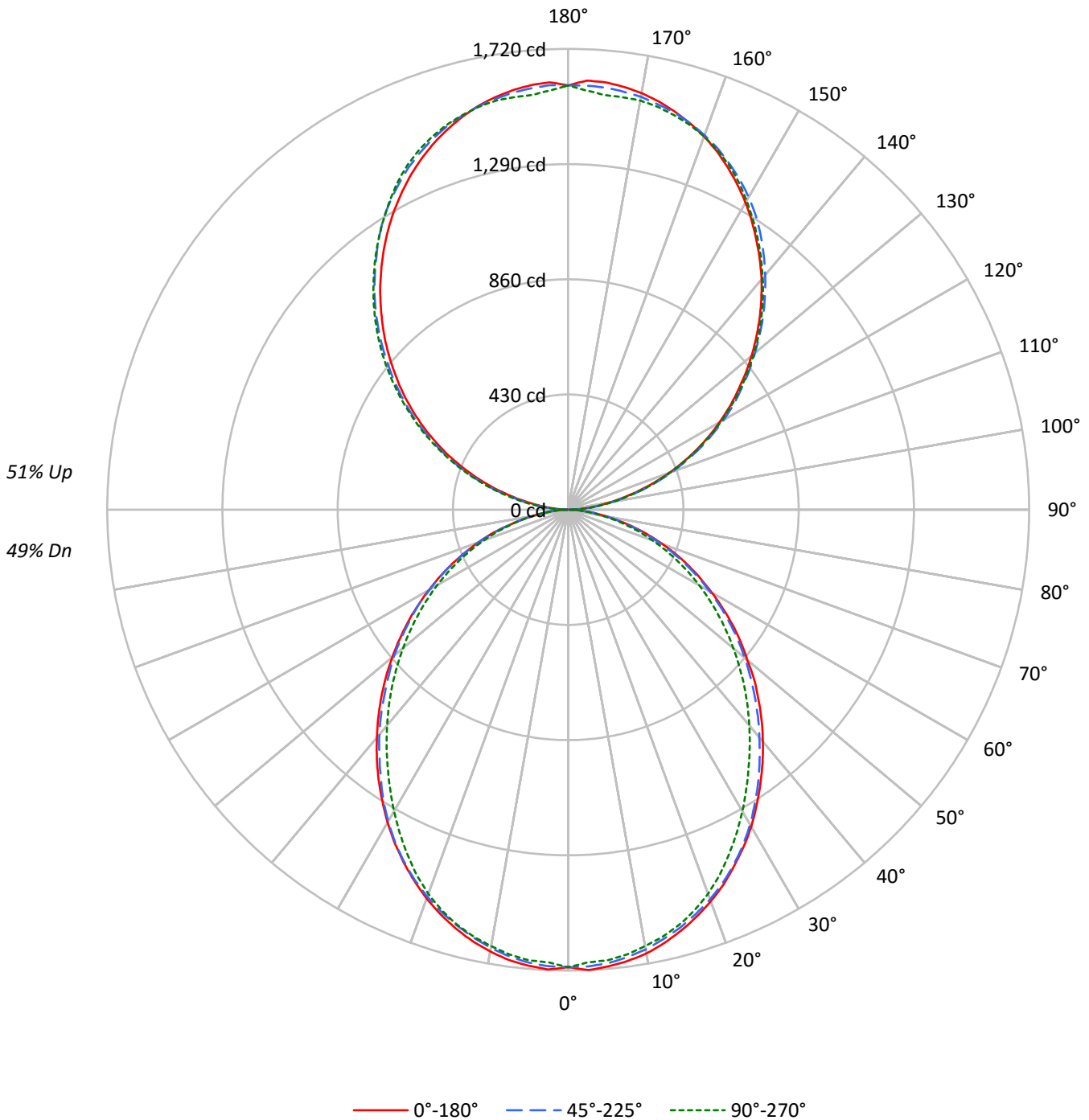
Lumens per Lamp: N/A
Luminaire Lumens: 8603.6 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	93	90	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	82	76	70	82	75	70	66	64	60	57	53	50	48	43	41	40	35
3	81	72	65	59	75	66	60	55	56	52	48	47	44	41	38	36	34	30
4	74	64	56	50	68	59	52	47	50	45	41	42	38	35	34	32	29	26
5	68	57	49	43	63	53	45	40	45	39	35	38	34	30	31	28	26	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	27	28	25	23	20
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	17
8	54	42	34	29	50	39	32	27	34	28	24	28	24	21	24	20	18	16
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13503	13503	13503
5°	13478	12198	13454
10°	13289	11081	13232
15°	13000	10085	12934
20°	12668	9110	12576
25°	12265	8124	12153
30°	11843	7195	11691
35°	11340	6338	11180
40°	10834	5581	10646
45°	10288	4884	10088
50°	9673	4226	9501
55°	9122	3615	8883
60°	8437	3029	8198
65°	7762	2457	7456
70°	6900	1891	6575
75°	5803	1329	5379
80°	4360	809	4082
85°	2559	358	2421



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.7	1.9
10°-20°	453.2	5.3
20°-30°	663.9	7.7
30°-40°	760.9	8.8
40°-50°	750.1	8.7
50°-60°	646.6	7.5
60°-70°	471.4	5.5
70°-80°	257.1	3.0
80°-90°	67.5	0.8
90°-100°	81.5	0.9
100°-110°	295.2	3.4
110°-120°	522.7	6.1
120°-130°	694.8	8.1
130°-140°	781.4	9.1
140°-150°	768.3	8.9
150°-160°	648.4	7.5
160°-170°	430.1	5.0
170°-180°	149.9	1.7
0°-30°	1277.8	14.9
0°-40°	2038.7	23.7
0°-60°	3435.4	39.9
0°-90°	4231.4	49.2
90°-120°	899.4	10.5
90°-150°	3143.8	36.5
90°-180°	4372.0	50.8
0°-180°	8603.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1707	1707	1707	1707	1707	
5°	1712	1699	1688	1697	1708	162
15°	1627	1614	1603	1606	1619	458
25°	1466	1462	1419	1449	1452	675
35°	1250	1237	1174	1219	1232	782
45°	1004	984	928	967	985	775
55°	748	736	683	720	729	668
65°	496	485	448	473	477	491
75°	255	246	226	235	236	271
85°	58	59	55	56	55	66
90°	2	4	3	4	2	8
95°	68	75	73	69	53	74
105°	274	287	283	277	255	290
115°	528	541	532	524	505	521
125°	772	790	782	771	748	691
135°	1010	1029	1020	1011	980	779
145°	1225	1252	1234	1232	1196	767
155°	1409	1424	1419	1409	1383	649
165°	1538	1534	1525	1524	1520	434
175°	1601	1582	1554	1579	1591	152
180°	1584	1584	1584	1584	1584	



TEST NUMBER: P199493

CATALOG NUMBER: S124-DIW-U2-2-40-0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1707.4	1707.4	1707.4	1707.4	1707.4	1707.4	1707.4	1707.4	1707.4
2.5°	1719.8	1700.2	1706.4	1702.2	1690.9	1702.2	1705.3	1699.1	1717.7
5°	1711.5	1692.9	1699.1	1692.9	1687.8	1691.9	1697.1	1689.8	1708.4
7.5°	1699.1	1679.5	1684.7	1679.5	1674.4	1678.5	1681.6	1675.4	1695.0
10°	1681.6	1660.9	1666.1	1659.9	1653.7	1657.8	1660.9	1654.7	1674.4
12.5°	1656.8	1637.2	1641.3	1637.2	1632.0	1633.1	1635.1	1628.9	1649.6
15°	1626.9	1607.3	1614.5	1610.4	1603.1	1607.3	1606.2	1599.0	1618.6
17.5°	1592.8	1574.2	1582.5	1578.4	1568.0	1574.2	1574.2	1562.9	1583.5
20°	1555.6	1536.0	1547.4	1537.1	1525.7	1531.9	1537.1	1523.6	1544.3
22.5°	1514.4	1493.7	1507.1	1488.5	1476.2	1483.4	1495.8	1481.3	1499.9
25°	1465.8	1449.3	1461.7	1435.9	1419.4	1429.7	1449.3	1434.9	1452.4
27.5°	1418.4	1401.8	1412.2	1383.3	1360.5	1374.0	1398.7	1386.4	1401.8
30°	1365.7	1352.3	1357.4	1323.4	1299.6	1314.1	1343.0	1335.8	1348.2
32.5°	1307.9	1297.6	1297.6	1261.4	1236.7	1253.2	1284.2	1282.1	1290.3
35°	1250.1	1243.9	1236.7	1197.4	1173.7	1189.2	1219.1	1227.4	1232.5
37.5°	1191.2	1187.1	1173.7	1135.5	1112.8	1129.3	1157.2	1169.6	1172.7
40°	1130.3	1128.3	1109.7	1073.6	1050.9	1067.4	1096.3	1111.8	1110.7
42.5°	1068.4	1070.5	1047.8	1012.7	990.0	1006.5	1033.3	1054.0	1048.8
45°	1004.4	1010.6	983.8	951.8	928.0	945.6	967.2	993.1	984.8
47.5°	942.5	949.7	921.8	888.8	866.1	884.7	906.3	934.2	921.8
50°	872.3	886.7	859.9	826.9	804.1	821.7	847.5	871.2	856.8
52.5°	811.4	821.7	798.0	766.0	744.3	758.7	784.5	808.3	792.8
55°	748.4	759.8	736.0	704.0	683.4	697.8	720.5	744.3	728.8
57.5°	682.3	693.7	672.0	643.1	623.5	639.0	662.7	679.2	664.8
60°	618.3	632.8	609.0	581.2	564.7	577.0	595.6	615.2	600.8
62.5°	556.4	569.8	547.1	521.3	505.8	517.2	536.8	552.3	538.8
65°	496.5	504.8	485.2	461.4	448.0	455.2	472.8	490.3	476.9
67.5°	435.6	443.9	424.3	403.6	390.2	397.4	411.9	428.4	416.0
70°	373.7	380.9	364.4	345.8	334.5	341.7	355.1	367.5	356.1
72.5°	314.8	320.0	304.5	290.1	281.8	287.0	296.3	307.6	302.5
75°	255.0	261.2	245.7	233.3	226.1	228.1	235.4	244.7	236.4
77.5°	198.2	204.4	192.0	182.7	178.6	179.6	184.8	192.0	181.7
80°	145.6	150.7	143.5	135.2	131.1	133.2	136.3	140.4	136.3
82.5°	98.1	103.2	98.1	92.9	89.8	91.9	92.9	95.0	91.9
85°	57.8	61.9	58.8	55.7	54.7	54.7	55.7	57.8	54.7
87.5°	25.8	28.9	26.8	24.8	21.7	22.7	23.7	25.8	23.7
90°	2.1	5.2	4.1	3.1	3.1	3.1	4.1	5.2	2.1
92.5°	31.0	35.1	36.1	33.0	33.0	32.0	29.9	28.9	18.6
95°	68.1	74.3	75.4	75.4	73.3	71.2	69.2	64.0	52.6
97.5°	110.5	117.7	119.7	117.7	118.7	116.6	111.5	106.3	95.0
100°	159.0	168.3	170.3	168.3	169.3	164.1	162.1	156.9	143.5
102.5°	212.6	224.0	225.0	223.0	223.0	218.8	216.8	210.6	197.2
105°	273.6	285.9	287.0	282.8	282.8	278.7	276.7	270.5	255.0
107.5°	335.5	347.9	347.9	343.7	343.7	340.7	336.5	332.4	316.9
110°	399.5	409.8	411.9	406.7	405.7	402.6	398.5	392.3	378.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	463.5	473.8	475.9	469.7	468.7	462.5	461.4	454.2	440.8
115°	527.5	537.8	540.9	533.7	531.6	524.4	524.4	517.2	504.8
117.5°	589.4	601.8	604.9	596.7	595.6	589.4	585.3	579.1	565.7
120°	651.4	666.9	668.9	659.6	658.6	651.4	649.3	641.0	627.6
122.5°	713.3	728.8	731.9	723.6	720.5	711.2	710.2	703.0	688.5
125°	772.1	789.7	789.7	785.6	782.5	775.2	771.1	762.9	748.4
127.5°	833.0	851.6	850.6	847.5	844.4	834.1	831.0	822.7	807.2
130°	892.9	909.4	909.4	907.4	905.3	896.0	890.9	882.6	865.0
132.5°	951.8	968.3	970.3	965.2	963.1	950.7	951.8	941.4	923.9
135°	1009.6	1024.0	1029.2	1020.9	1019.9	1006.5	1010.6	997.2	979.6
137.5°	1066.3	1077.7	1087.0	1076.7	1075.6	1062.2	1068.4	1050.9	1035.4
140°	1122.1	1131.4	1143.8	1131.4	1129.3	1116.9	1123.1	1104.5	1091.1
142.5°	1174.7	1183.0	1198.5	1185.1	1182.0	1170.6	1177.8	1156.2	1143.8
145°	1225.3	1231.5	1252.2	1237.7	1233.6	1223.3	1232.5	1205.7	1196.4
147.5°	1275.9	1279.0	1302.7	1289.3	1283.1	1274.9	1284.2	1254.2	1247.0
150°	1323.4	1323.4	1347.1	1336.8	1331.6	1322.3	1328.5	1299.6	1294.5
152.5°	1367.8	1365.7	1387.4	1381.2	1378.1	1367.8	1369.8	1343.0	1339.9
155°	1409.1	1404.9	1424.5	1421.4	1419.4	1409.1	1409.1	1382.2	1383.3
157.5°	1448.3	1440.0	1458.6	1457.6	1453.4	1445.2	1443.1	1419.4	1422.5
160°	1482.4	1475.1	1487.5	1485.4	1482.4	1474.1	1474.1	1453.4	1458.6
162.5°	1512.3	1503.0	1513.3	1507.1	1506.1	1496.8	1500.9	1483.4	1490.6
165°	1538.1	1528.8	1534.0	1525.7	1524.7	1516.4	1523.6	1511.3	1519.5
167.5°	1560.8	1550.5	1549.5	1542.2	1540.2	1534.0	1542.2	1535.0	1544.3
170°	1578.4	1568.0	1564.9	1552.5	1550.5	1545.3	1557.7	1555.6	1563.9
172.5°	1591.8	1581.5	1574.2	1559.8	1552.5	1553.6	1570.1	1570.1	1579.4
175°	1601.1	1589.7	1581.5	1567.0	1553.6	1561.8	1579.4	1580.4	1590.7
177.5°	1603.1	1591.8	1584.5	1571.1	1566.0	1567.0	1585.6	1585.6	1596.9
180°	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5

(END OF REPORT)