

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: P199474

Luminaire Tested: **S124-DIW-U1-2-35-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199474
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-U1-2-35-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL1-3500K, NO LENS
DOWNLIGHT LL2-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

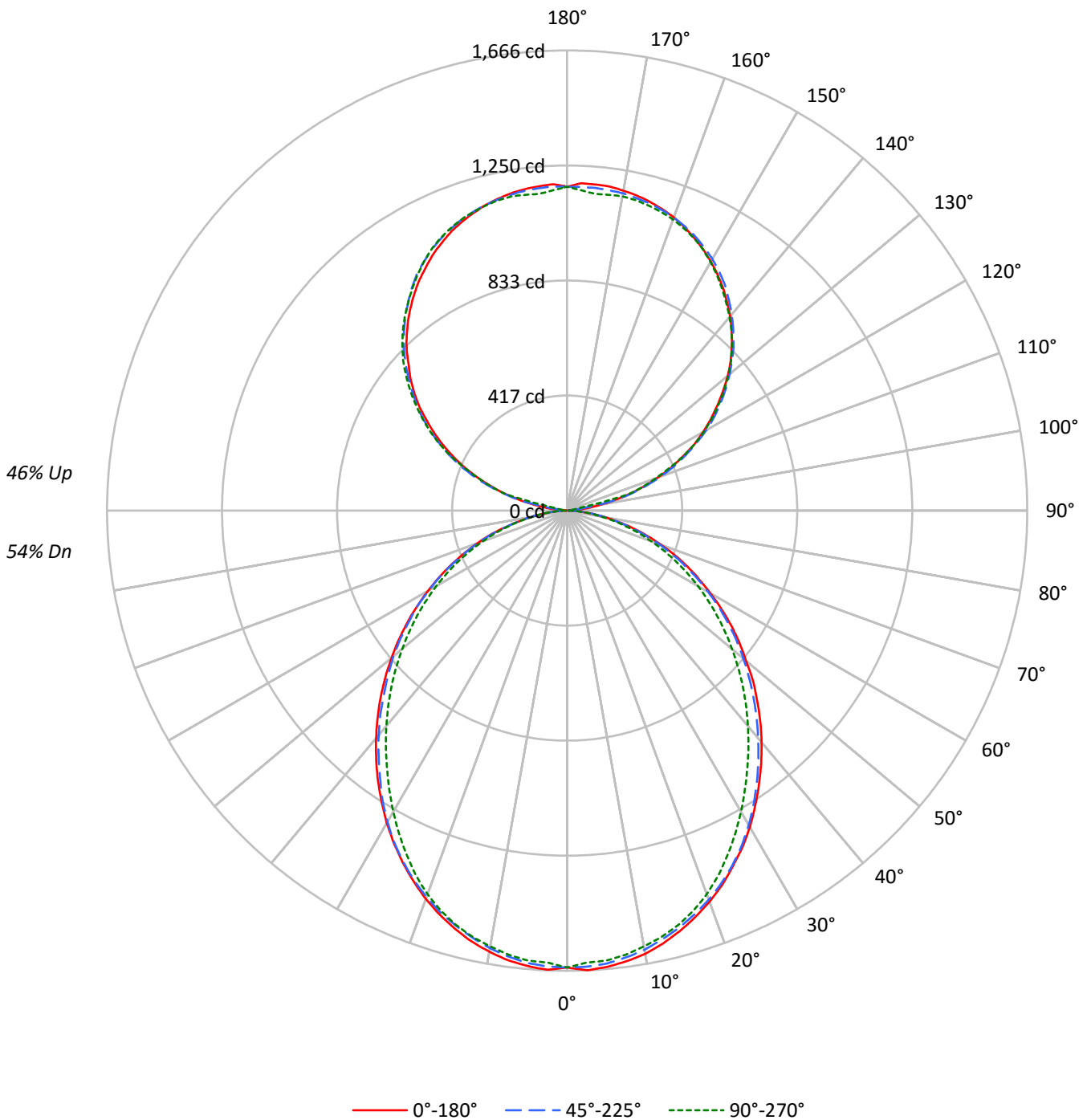
Lumens per Lamp: N/A
Luminaire Lumens: 7615.5 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 67
Input Voltage (V): NR
Input Current (A_{in}): 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: P199474

CATALOG NUMBER: S124-DIW-U1-2-35-0048-1D-UDD-1-NA-W

Luminous Intensity Polar Plot





TEST NUMBER: P199474

CATALOG NUMBER: S124-DIW-U1-2-35-0048-1D-UDD-1-NA-W

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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54
1	99	94	91	87	91	88	84	81	75	73	70	64	62	60	53	52	51	46
2	90	83	76	71	83	77	71	67	66	62	58	56	53	50	47	45	43	38
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	41	39	36	33
4	75	64	56	50	69	60	53	48	52	46	42	44	40	37	37	34	32	28
5	69	57	49	43	64	54	46	41	46	41	36	40	35	32	33	30	28	24
6	64	52	43	38	59	48	41	36	42	36	32	36	31	28	30	27	24	21
7	59	47	39	33	55	44	36	31	38	32	28	33	28	25	28	24	22	19
8	55	42	35	29	51	40	33	28	35	29	25	30	25	22	26	22	19	17
9	51	39	31	26	47	36	30	25	32	26	22	28	23	20	24	20	18	15
10	48	36	28	23	44	33	27	22	29	24	20	26	21	18	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13080	13080	13080
5°	13057	11816	13033
10°	12873	10735	12818
15°	12593	9770	12529
20°	12272	8825	12183
25°	11882	7870	11773
30°	11473	6970	11325
35°	10985	6140	10831
40°	10495	5406	10313
45°	9967	4731	9772
50°	9371	4094	9204
55°	8837	3502	8605
60°	8174	2934	7942
65°	7520	2380	7223
70°	6684	1831	6370
75°	5621	1287	5211
80°	4222	784	3953
85°	2479	347	2346



TEST NUMBER: P199474

CATALOG NUMBER: S124-DIW-U1-2-35-0048-1D-UDD-1-NA-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	2.0
10°-20°	439.0	5.8
20°-30°	643.1	8.4
30°-40°	737.1	9.7
40°-50°	726.6	9.5
50°-60°	626.4	8.2
60°-70°	456.7	6.0
70°-80°	249.1	3.3
80°-90°	65.4	0.9
90°-100°	30.1	0.4
100°-110°	237.0	3.1
110°-120°	458.6	6.0
120°-130°	596.4	7.8
130°-140°	647.4	8.5
140°-150°	612.6	8.0
150°-160°	499.7	6.6
160°-170°	323.5	4.2
170°-180°	111.3	1.5
0°-30°	1237.8	16.3
0°-40°	1974.9	25.9
0°-60°	3327.9	43.7
0°-90°	4099.1	53.8
90°-120°	725.7	9.5
90°-150°	2582.0	33.9
90°-180°	3516.0	46.2
0°-180°	7615.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1654	1654	1654	1654	1654	
5°	1658	1646	1635	1644	1655	157
15°	1576	1564	1553	1556	1568	444
25°	1420	1416	1375	1404	1407	654
35°	1211	1198	1137	1181	1194	757
45°	973	953	899	937	954	751
55°	725	713	662	698	706	647
65°	481	470	434	458	462	476
75°	247	238	219	228	229	262
85°	56	57	53	54	53	64
90°	2	4	3	4	2	6
95°	41	10	11	11	37	52
105°	236	242	233	237	229	249
115°	460	472	463	466	449	456
125°	664	678	670	663	652	594
135°	843	852	844	836	822	650
145°	984	996	979	981	963	615
155°	1089	1096	1087	1085	1072	502
165°	1157	1152	1143	1145	1145	327
175°	1185	1172	1151	1172	1179	113
180°	1172	1172	1172	1172	1172	



TEST NUMBER: P199474

CATALOG NUMBER: S124-DIW-U1-2-35-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0
2.5°	1666.0	1647.0	1653.0	1649.0	1638.0	1649.0	1652.0	1646.0	1664.0
5°	1658.0	1640.0	1646.0	1640.0	1635.0	1639.0	1644.0	1637.0	1655.0
7.5°	1646.0	1627.0	1632.0	1627.0	1622.0	1626.0	1629.0	1623.0	1642.0
10°	1629.0	1609.0	1614.0	1608.0	1602.0	1606.0	1609.0	1603.0	1622.0
12.5°	1605.0	1586.0	1590.0	1586.0	1581.0	1582.0	1584.0	1578.0	1598.0
15°	1576.0	1557.0	1564.0	1560.0	1553.0	1557.0	1556.0	1549.0	1568.0
17.5°	1543.0	1525.0	1533.0	1529.0	1519.0	1525.0	1525.0	1514.0	1534.0
20°	1507.0	1488.0	1499.0	1489.0	1478.0	1484.0	1489.0	1476.0	1496.0
22.5°	1467.0	1447.0	1460.0	1442.0	1430.0	1437.0	1449.0	1435.0	1453.0
25°	1420.0	1404.0	1416.0	1391.0	1375.0	1385.0	1404.0	1390.0	1407.0
27.5°	1374.0	1358.0	1368.0	1340.0	1318.0	1331.0	1355.0	1343.0	1358.0
30°	1323.0	1310.0	1315.0	1282.0	1259.0	1273.0	1301.0	1294.0	1306.0
32.5°	1267.0	1257.0	1257.0	1222.0	1198.0	1214.0	1244.0	1242.0	1250.0
35°	1211.0	1205.0	1198.0	1160.0	1137.0	1152.0	1181.0	1189.0	1194.0
37.5°	1154.0	1150.0	1137.0	1100.0	1078.0	1094.0	1121.0	1133.0	1136.0
40°	1095.0	1093.0	1075.0	1040.0	1018.0	1034.0	1062.0	1077.0	1076.0
42.5°	1035.0	1037.0	1015.0	981.0	959.0	975.0	1001.0	1021.0	1016.0
45°	973.0	979.0	953.0	922.0	899.0	916.0	937.0	962.0	954.0
47.5°	913.0	920.0	893.0	861.0	839.0	857.0	878.0	905.0	893.0
50°	845.0	859.0	833.0	801.0	779.0	796.0	821.0	844.0	830.0
52.5°	786.0	796.0	773.0	742.0	721.0	735.0	760.0	783.0	768.0
55°	725.0	736.0	713.0	682.0	662.0	676.0	698.0	721.0	706.0
57.5°	661.0	672.0	651.0	623.0	604.0	619.0	642.0	658.0	644.0
60°	599.0	613.0	590.0	563.0	547.0	559.0	577.0	596.0	582.0
62.5°	539.0	552.0	530.0	505.0	490.0	501.0	520.0	535.0	522.0
65°	481.0	489.0	470.0	447.0	434.0	441.0	458.0	475.0	462.0
67.5°	422.0	430.0	411.0	391.0	378.0	385.0	399.0	415.0	403.0
70°	362.0	369.0	353.0	335.0	324.0	331.0	344.0	356.0	345.0
72.5°	305.0	310.0	295.0	281.0	273.0	278.0	287.0	298.0	293.0
75°	247.0	253.0	238.0	226.0	219.0	221.0	228.0	237.0	229.0
77.5°	192.0	198.0	186.0	177.0	173.0	174.0	179.0	186.0	176.0
80°	141.0	146.0	139.0	131.0	127.0	129.0	132.0	136.0	132.0
82.5°	95.0	100.0	95.0	90.0	87.0	89.0	90.0	92.0	89.0
85°	56.0	60.0	57.0	54.0	53.0	53.0	54.0	56.0	53.0
87.5°	25.0	28.0	26.0	24.0	21.0	22.0	23.0	25.0	23.0
90°	2.0	5.0	4.0	3.0	3.0	3.0	4.0	5.0	2.0
92.5°	13.2	6.9	6.9	6.9	6.9	6.9	6.9	7.6	9.0
95°	41.0	26.4	10.4	11.1	11.1	11.1	11.1	18.1	36.8
97.5°	79.9	93.1	20.1	13.2	13.2	13.2	20.1	88.2	74.3
100°	126.4	138.9	101.4	32.0	23.6	29.9	88.9	131.3	120.2
102.5°	178.5	194.5	186.8	104.9	60.4	89.6	181.3	186.1	173.6
105°	236.2	250.0	242.4	245.9	232.7	236.8	236.8	239.6	229.2
107.5°	293.1	304.9	300.7	298.0	287.6	290.3	297.3	295.9	284.1
110°	350.1	361.9	361.9	352.8	340.3	345.2	356.3	349.4	339.6



TEST NUMBER: P199474

CATALOG NUMBER: S124-DIW-U1-2-35-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	407.0	416.0	418.1	413.3	398.7	405.6	411.9	400.8	394.5
115°	460.5	473.7	472.3	473.0	462.6	462.6	466.1	457.7	448.7
117.5°	518.1	527.9	525.8	526.5	519.5	516.8	516.1	510.5	500.8
120°	568.8	580.0	581.4	576.5	571.6	566.1	569.5	561.9	551.5
122.5°	616.8	629.3	631.4	626.5	621.6	615.4	618.2	609.8	600.1
125°	664.0	677.9	677.9	674.4	669.6	663.3	662.6	655.7	652.2
127.5°	711.2	727.2	724.4	721.0	716.8	709.8	706.4	702.2	696.6
130°	759.2	770.3	767.5	764.7	761.9	753.6	750.8	746.7	740.4
132.5°	802.9	809.2	810.6	805.0	805.0	794.6	793.9	789.0	777.9
135°	843.2	849.5	852.2	843.9	843.9	833.5	835.6	828.6	821.7
137.5°	881.4	886.3	889.7	880.0	880.7	871.0	874.5	862.7	859.9
140°	918.2	920.3	926.6	916.1	914.7	906.4	911.3	899.5	896.0
142.5°	950.9	953.6	961.3	950.2	946.7	940.4	946.7	932.1	930.0
145°	984.2	984.9	996.0	982.8	978.6	973.8	981.4	964.1	962.7
147.5°	1013.4	1012.0	1025.2	1014.1	1009.9	1005.0	1013.4	993.2	993.2
150°	1040.5	1039.1	1051.6	1042.5	1038.4	1034.2	1039.1	1020.3	1020.3
152.5°	1066.9	1062.0	1074.5	1066.9	1065.5	1059.2	1063.4	1045.3	1048.1
155°	1089.1	1084.2	1096.0	1089.8	1087.0	1082.1	1084.9	1067.5	1071.7
157.5°	1110.6	1103.0	1113.4	1110.6	1105.7	1103.0	1103.0	1089.1	1093.9
160°	1129.4	1120.3	1129.4	1125.2	1121.0	1117.6	1120.3	1106.4	1112.7
162.5°	1144.6	1136.3	1141.2	1135.6	1133.5	1128.0	1133.5	1122.4	1129.4
165°	1157.1	1148.1	1151.6	1143.9	1142.6	1138.4	1145.3	1137.7	1144.6
167.5°	1168.3	1159.9	1158.5	1150.9	1150.9	1145.3	1153.7	1149.5	1156.5
170°	1175.9	1169.0	1166.2	1155.1	1155.1	1150.2	1162.0	1158.5	1166.9
172.5°	1183.5	1174.5	1169.6	1157.8	1153.0	1153.7	1168.3	1165.5	1173.8
175°	1184.9	1178.0	1172.4	1159.9	1150.9	1157.1	1171.7	1172.4	1178.7
177.5°	1186.3	1179.4	1172.4	1162.0	1160.6	1159.2	1174.5	1173.8	1182.8
180°	1172.4	1172.4	1172.4	1172.4	1172.4	1172.4	1172.4	1172.4	1172.4

(END OF REPORT)