

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: P199473

Luminaire Tested: **S124-DIW-U1-2-35-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199473  
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-U1-2-35-0048-1D-UDD-1-5-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL1-3500K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL2-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

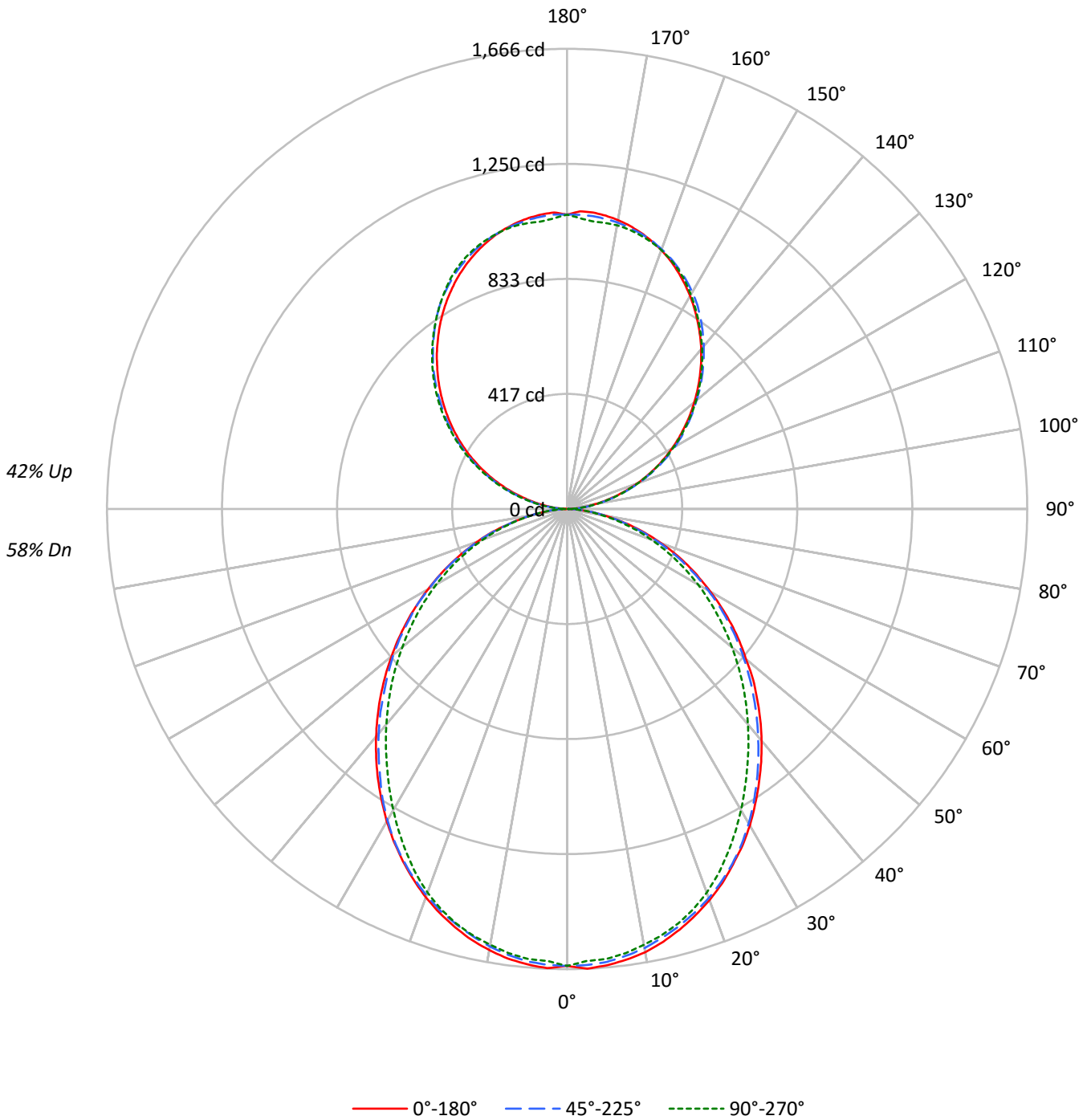
Lumens per Lamp: N/A  
Luminaire Lumens: 7041.0 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58
1	100	95	91	88	93	89	86	83	77	75	73	66	65	63	56	55	54	49
2	91	83	77	72	84	78	73	68	68	64	60	58	55	53	50	48	46	41
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	44	41	39	35
4	76	65	57	51	71	61	54	48	53	48	43	46	42	38	40	36	34	30
5	70	58	50	44	65	55	47	42	48	42	38	42	37	33	36	32	29	26
6	64	52	44	38	60	49	42	36	43	37	33	38	33	29	32	29	26	23
7	60	47	39	34	55	44	37	32	39	33	29	34	30	26	30	26	23	21
8	55	43	35	30	52	40	33	28	36	30	26	31	27	23	27	24	21	18
9	52	39	32	27	48	37	30	25	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.7	2.2
10°-20°	439.0	6.2
20°-30°	643.1	9.1
30°-40°	737.1	10.5
40°-50°	726.6	10.3
50°-60°	626.4	8.9
60°-70°	456.7	6.5
70°-80°	249.1	3.5
80°-90°	65.4	0.9
90°-100°	55.0	0.8
100°-110°	198.6	2.8
110°-120°	351.7	5.0
120°-130°	467.5	6.6
130°-140°	525.7	7.5
140°-150°	516.9	7.3
150°-160°	436.3	6.2
160°-170°	289.4	4.1
170°-180°	100.9	1.4
0°-30°	1237.8	17.6
0°-40°	1974.9	28.0
0°-60°	3327.9	47.3
0°-90°	4099.1	58.2
90°-120°	605.3	8.6
90°-150°	2115.4	30.0
90°-180°	2942.0	41.8
0°-180°	7041.0	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	7
95°	46	51	49	46	35	50
105°	184	193	190	186	172	195
115°	355	364	358	353	340	351
125°	520	531	526	519	504	465
135°	679	692	686	680	659	524
145°	824	842	830	829	805	516
155°	948	958	955	948	931	437
165°	1035	1032	1026	1025	1022	292
175°	1077	1064	1045	1063	1070	102
180°	1066	1066	1066	1066	1066	



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**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°	20.8	23.6	24.3	22.2	22.2	21.5	20.1	19.4	12.5
95°	45.8	50.0	50.7	50.7	49.3	47.9	46.5	43.1	35.4
97.5°	74.3	79.2	80.6	79.2	79.9	78.5	75.0	71.5	63.9
100°	107.0	113.2	114.6	113.2	113.9	110.4	109.0	105.6	96.5
102.5°	143.1	150.7	151.4	150.0	150.0	147.2	145.9	141.7	132.7
105°	184.1	192.4	193.1	190.3	190.3	187.5	186.1	182.0	171.6
107.5°	225.7	234.1	234.1	231.3	231.3	229.2	226.4	223.7	213.2
110°	268.8	275.7	277.1	273.7	273.0	270.9	268.1	263.9	254.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	311.9	318.8	320.2	316.0	315.3	311.2	310.5	305.6	296.6
115°	354.9	361.9	364.0	359.1	357.7	352.8	352.8	348.0	339.6
117.5°	396.6	404.9	407.0	401.5	400.8	396.6	393.8	389.7	380.6
120°	438.3	448.7	450.1	443.8	443.1	438.3	436.9	431.3	422.3
122.5°	479.9	490.4	492.4	486.9	484.8	478.6	477.9	473.0	463.3
125°	519.5	531.3	531.3	528.6	526.5	521.6	518.8	513.3	503.6
127.5°	560.5	573.0	572.3	570.2	568.2	561.2	559.1	553.6	543.2
130°	600.8	611.9	611.9	610.5	609.1	602.9	599.4	593.9	582.0
132.5°	640.4	651.5	652.9	649.4	648.0	639.7	640.4	633.4	621.6
135°	679.3	689.0	692.5	686.9	686.2	677.2	680.0	671.0	659.1
137.5°	717.5	725.1	731.4	724.4	723.7	714.7	718.9	707.1	696.6
140°	755.0	761.2	769.6	761.2	759.9	751.5	755.7	743.2	734.2
142.5°	790.4	796.0	806.4	797.4	795.3	787.6	792.5	777.9	769.6
145°	824.4	828.6	842.5	832.8	830.0	823.1	829.3	811.3	805.0
147.5°	858.5	860.6	876.5	867.5	863.3	857.8	864.0	843.9	839.0
150°	890.4	890.4	906.4	899.5	896.0	889.7	893.9	874.5	871.0
152.5°	920.3	918.9	933.5	929.3	927.2	920.3	921.7	903.6	901.5
155°	948.1	945.3	958.5	956.4	955.0	948.1	948.1	930.0	930.7
157.5°	974.5	968.9	981.4	980.7	977.9	972.4	971.0	955.0	957.1
160°	997.4	992.5	1000.9	999.5	997.4	991.8	991.8	977.9	981.4
162.5°	1017.5	1011.3	1018.2	1014.1	1013.4	1007.1	1009.9	998.1	1003.0
165°	1034.9	1028.7	1032.1	1026.6	1025.9	1020.3	1025.2	1016.8	1022.4
167.5°	1050.2	1043.2	1042.5	1037.7	1036.3	1032.1	1037.7	1032.8	1039.1
170°	1062.0	1055.0	1053.0	1044.6	1043.2	1039.8	1048.1	1046.7	1052.3
172.5°	1071.0	1064.1	1059.2	1049.5	1044.6	1045.3	1056.4	1056.4	1062.7
175°	1077.3	1069.6	1064.1	1054.4	1045.3	1050.9	1062.7	1063.4	1070.3
177.5°	1078.7	1071.0	1066.2	1057.1	1053.7	1054.4	1066.9	1066.9	1074.5
180°	1065.5	1065.5	1065.5	1065.5	1065.5	1065.5	1065.5	1065.5	1065.5

(END OF REPORT)