

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: P199472

Luminaire Tested: **S124-DIP-U1-2-30-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199472  
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-DIP-U1-2-30-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL1-3000K, NO LENS  
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7464.9 lumens  
Efficiency: N/A  
Efficacy: 111.4 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

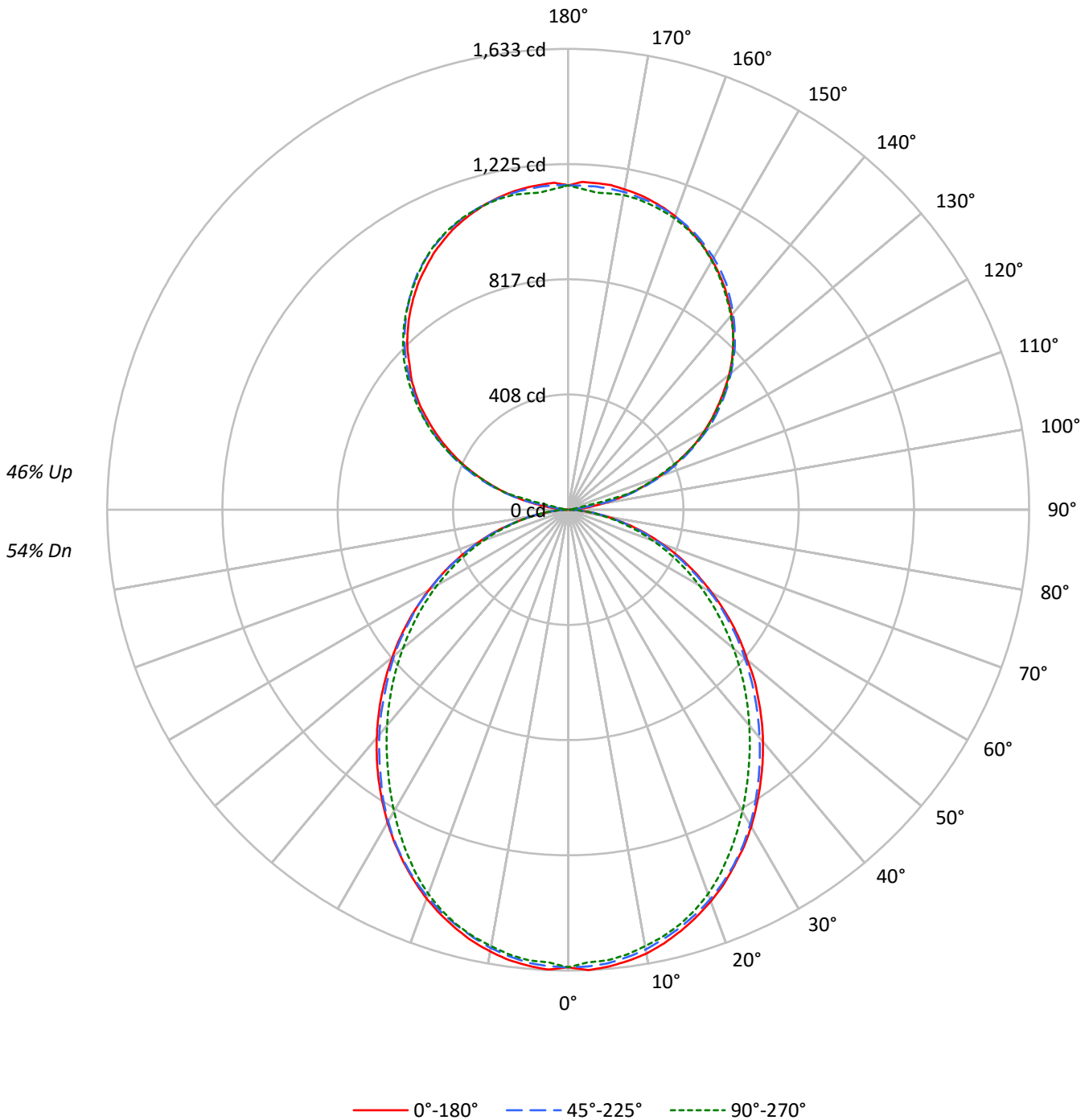
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	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	2.0
10°-20°	430.3	5.8
20°-30°	630.4	8.4
30°-40°	722.5	9.7
40°-50°	712.3	9.5
50°-60°	614.0	8.2
60°-70°	447.7	6.0
70°-80°	244.1	3.3
80°-90°	64.1	0.9
90°-100°	29.5	0.4
100°-110°	232.3	3.1
110°-120°	449.6	6.0
120°-130°	584.6	7.8
130°-140°	634.6	8.5
140°-150°	600.4	8.0
150°-160°	489.8	6.6
160°-170°	317.1	4.2
170°-180°	109.1	1.5
0°-30°	1213.4	16.3
0°-40°	1935.9	25.9
0°-60°	3262.1	43.7
0°-90°	4018.0	53.8
90°-120°	711.4	9.5
90°-150°	2530.9	33.9
90°-180°	3447.0	46.2
0°-180°	7464.9	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°	40	10	11	11	36	51
105°	232	238	228	232	225	244
115°	451	463	453	457	440	447
125°	651	664	656	650	639	582
135°	826	835	827	819	805	637
145°	965	976	959	962	944	603
155°	1068	1074	1066	1064	1050	492
165°	1134	1129	1120	1123	1122	320
175°	1162	1149	1128	1149	1155	111
180°	1149	1149	1149	1149	1149	



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CATALOG NUMBER: S124-DIP-U1-2-30-X-X0048-1D-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°	12.9	6.8	6.8	6.8	6.8	6.8	6.8	7.5	8.9
95°	40.2	25.9	10.2	10.9	10.9	10.9	10.9	17.7	36.1
97.5°	78.3	91.2	19.7	12.9	12.9	12.9	19.7	86.5	72.8
100°	123.9	136.2	99.4	31.3	23.1	29.3	87.1	128.7	117.8
102.5°	175.0	190.6	183.1	102.8	59.2	87.8	177.7	182.5	170.2
105°	231.5	245.1	237.6	241.0	228.1	232.2	232.2	234.9	224.7
107.5°	287.3	298.9	294.8	292.1	281.9	284.6	291.4	290.0	278.5
110°	343.1	354.7	354.7	345.9	333.6	338.4	349.3	342.5	332.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	399.0	407.8	409.9	405.1	390.8	397.6	403.7	392.8	386.7
115°	451.4	464.3	463.0	463.6	453.4	453.4	456.8	448.7	439.8
117.5°	507.9	517.4	515.4	516.1	509.3	506.5	505.9	500.4	490.9
120°	557.6	568.5	569.9	565.1	560.3	554.9	558.3	550.8	540.6
122.5°	604.6	616.8	618.9	614.1	609.3	603.2	605.9	597.8	588.2
125°	650.9	664.5	664.5	661.1	656.3	650.2	649.5	642.7	639.3
127.5°	697.2	712.8	710.1	706.7	702.6	695.8	692.4	688.3	682.9
130°	744.1	755.0	752.3	749.6	746.9	738.7	736.0	731.9	725.8
132.5°	787.0	793.2	794.5	789.1	789.1	778.9	778.2	773.4	762.5
135°	826.5	832.7	835.4	827.2	827.2	817.0	819.0	812.2	805.4
137.5°	864.0	868.7	872.1	862.6	863.3	853.8	857.2	845.6	842.9
140°	900.1	902.1	908.2	898.0	896.7	888.5	893.3	881.7	878.3
142.5°	932.1	934.8	942.3	931.4	928.0	921.8	928.0	913.7	911.6
145°	964.7	965.4	976.3	963.4	959.3	954.5	962.0	945.0	943.6
147.5°	993.3	992.0	1004.9	994.0	989.9	985.2	993.3	973.6	973.6
150°	1019.9	1018.5	1030.8	1021.9	1017.8	1013.8	1018.5	1000.1	1000.1
152.5°	1045.8	1041.0	1053.2	1045.8	1044.4	1038.3	1042.4	1024.7	1027.4
155°	1067.5	1062.8	1074.4	1068.2	1065.5	1060.7	1063.5	1046.4	1050.5
157.5°	1088.6	1081.2	1091.4	1088.6	1083.9	1081.2	1081.2	1067.5	1072.3
160°	1107.0	1098.2	1107.0	1102.9	1098.9	1095.5	1098.2	1084.6	1090.7
162.5°	1122.0	1113.8	1118.6	1113.2	1111.1	1105.7	1111.1	1100.2	1107.0
165°	1134.3	1125.4	1128.8	1121.3	1120.0	1115.9	1122.7	1115.2	1122.0
167.5°	1145.2	1137.0	1135.6	1128.1	1128.1	1122.7	1130.9	1126.8	1133.6
170°	1152.6	1145.8	1143.1	1132.2	1132.2	1127.5	1139.0	1135.6	1143.8
172.5°	1160.1	1151.3	1146.5	1134.9	1130.2	1130.9	1145.2	1142.4	1150.6
175°	1161.5	1154.7	1149.2	1137.0	1128.1	1134.3	1148.6	1149.2	1155.4
177.5°	1162.9	1156.1	1149.2	1139.0	1137.7	1136.3	1151.3	1150.6	1159.5
180°	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2

(END OF REPORT)