

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: P199483

Luminaire Tested: **S124-DIP-U2-1-30-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199483  
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-DIP-U2-1-30-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-3000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL1-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6942.3 lumens  
Efficiency: N/A  
Efficacy: 106.0 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

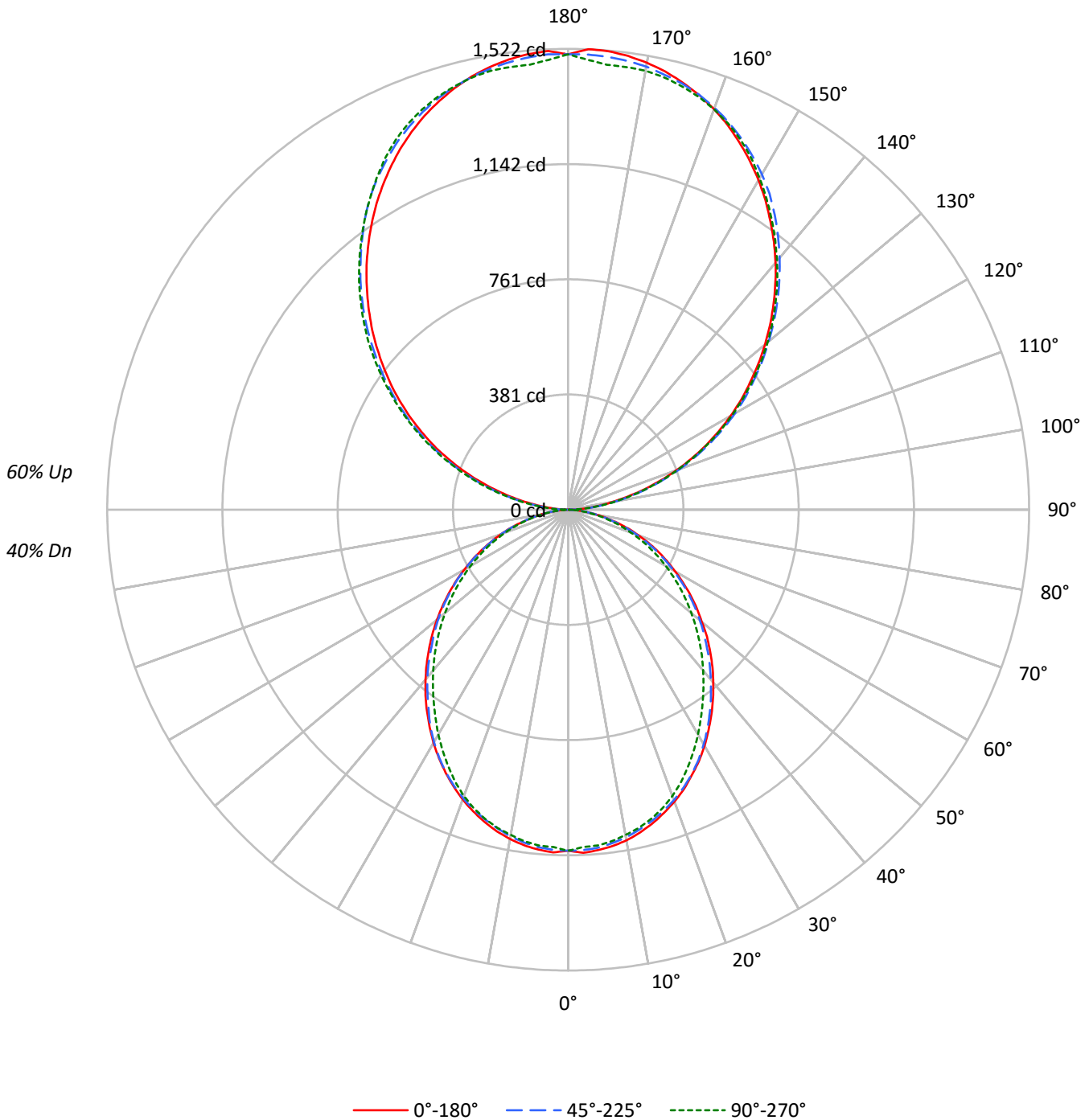
Input Watts (W): 65.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	96	91	88	84	87	83	80	77	68	66	64	54	53	52	42	41	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	34	29
3	80	70	63	57	72	64	58	53	53	48	45	42	39	37	33	31	29	24
4	73	62	54	49	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	42	61	51	44	39	42	37	33	34	30	27	26	24	22	18
6	61	50	42	36	56	46	39	33	38	33	29	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	41	33	28	48	37	31	26	31	26	22	25	22	19	20	17	15	13
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	8906	8906	8906
5°	8890	8045	8874
10°	8764	7309	8727
15°	8574	6651	8530
20°	8355	6009	8294
25°	8090	5358	8015
30°	7811	4745	7711
35°	7479	4180	7374
40°	7146	3681	7022
45°	6785	3221	6653
50°	6380	2788	6267
55°	6016	2384	5859
60°	5565	1998	5407
65°	5120	1620	4917
70°	4551	1247	4337
75°	3828	876	3548
80°	2875	534	2692
85°	1687	236	1598



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.0	1.5
10°-20°	298.9	4.3
20°-30°	437.9	6.3
30°-40°	501.8	7.2
40°-50°	494.7	7.1
50°-60°	426.4	6.1
60°-70°	310.9	4.5
70°-80°	169.6	2.4
80°-90°	44.5	0.6
90°-100°	77.3	1.1
100°-110°	280.3	4.0
110°-120°	496.3	7.1
120°-130°	659.8	9.5
130°-140°	742.0	10.7
140°-150°	729.5	10.5
150°-160°	615.7	8.9
160°-170°	408.4	5.9
170°-180°	142.3	2.1
0°-30°	842.8	12.1
0°-40°	1344.6	19.4
0°-60°	2265.8	32.6
0°-90°	2790.8	40.2
90°-120°	853.9	12.3
90°-150°	2985.1	43.0
90°-180°	4152.0	59.8
0°-180°	6942.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1126	1126	1126	1126	1126	
5°	1129	1121	1113	1119	1127	107
15°	1073	1065	1057	1059	1068	302
25°	967	964	936	956	958	445
35°	824	816	774	804	813	516
45°	662	649	612	638	650	511
55°	494	485	451	475	481	440
65°	328	320	296	312	314	324
75°	168	162	149	155	156	179
85°	38	39	36	37	36	43
90°	1	3	2	3	1	7
95°	65	72	70	66	50	71
105°	260	272	269	263	242	276
115°	501	514	505	498	479	495
125°	733	750	743	732	711	656
135°	959	977	968	960	930	740
145°	1164	1189	1171	1170	1136	728
155°	1338	1353	1348	1338	1314	616
165°	1460	1457	1448	1447	1443	412
175°	1520	1502	1475	1500	1510	144
180°	1504	1504	1504	1504	1504	



TEST NUMBER: P199483

CATALOG NUMBER: S124-DIP-U2-1-30-X-X0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1
2.5°	1134.3	1121.3	1125.4	1122.7	1115.2	1122.7	1124.7	1120.6	1132.9
5°	1128.8	1116.6	1120.6	1116.6	1113.2	1115.9	1119.3	1114.5	1126.8
7.5°	1120.6	1107.7	1111.1	1107.7	1104.3	1107.0	1109.1	1105.0	1117.9
10°	1109.1	1095.5	1098.9	1094.8	1090.7	1093.4	1095.5	1091.4	1104.3
12.5°	1092.7	1079.8	1082.5	1079.8	1076.4	1077.1	1078.4	1074.4	1088.0
15°	1073.0	1060.1	1064.8	1062.1	1057.3	1060.1	1059.4	1054.6	1067.5
17.5°	1050.5	1038.3	1043.7	1041.0	1034.2	1038.3	1038.3	1030.8	1044.4
20°	1026.0	1013.1	1020.6	1013.8	1006.3	1010.4	1013.8	1004.9	1018.5
22.5°	998.8	985.2	994.0	981.8	973.6	978.4	986.5	977.0	989.2
25°	966.8	955.9	964.1	947.0	936.1	943.0	955.9	946.4	957.9
27.5°	935.5	924.6	931.4	912.3	897.3	906.2	922.5	914.4	924.6
30°	900.7	891.9	895.3	872.8	857.2	866.7	885.8	881.0	889.2
32.5°	862.6	855.8	855.8	832.0	815.6	826.5	847.0	845.6	851.0
35°	824.5	820.4	815.6	789.8	774.1	784.3	804.1	809.5	812.9
37.5°	785.7	783.0	774.1	748.9	733.9	744.8	763.2	771.4	773.4
40°	745.5	744.1	731.9	708.1	693.1	704.0	723.0	733.3	732.6
42.5°	704.7	706.0	691.0	667.9	652.9	663.8	681.5	695.1	691.7
45°	662.4	666.5	648.8	627.7	612.1	623.6	637.9	655.0	649.5
47.5°	621.6	626.4	608.0	586.2	571.2	583.5	597.8	616.2	608.0
50°	575.3	584.8	567.1	545.3	530.4	541.9	559.0	574.6	565.1
52.5°	535.1	541.9	526.3	505.2	490.9	500.4	517.4	533.1	522.9
55°	493.6	501.1	485.4	464.3	450.7	460.2	475.2	490.9	480.7
57.5°	450.0	457.5	443.2	424.2	411.2	421.4	437.1	448.0	438.5
60°	407.8	417.3	401.7	383.3	372.4	380.6	392.8	405.8	396.2
62.5°	367.0	375.8	360.8	343.8	333.6	341.1	354.0	364.2	355.4
65°	327.5	332.9	320.0	304.3	295.5	300.2	311.8	323.4	314.5
67.5°	287.3	292.8	279.8	266.2	257.4	262.1	271.7	282.5	274.4
70°	246.5	251.2	240.3	228.1	220.6	225.4	234.2	242.4	234.9
72.5°	207.7	211.1	200.8	191.3	185.9	189.3	195.4	202.9	199.5
75°	168.2	172.3	162.0	153.9	149.1	150.5	155.2	161.4	155.9
77.5°	130.7	134.8	126.6	120.5	117.8	118.5	121.9	126.6	119.8
80°	96.0	99.4	94.6	89.2	86.5	87.8	89.9	92.6	89.9
82.5°	64.7	68.1	64.7	61.3	59.2	60.6	61.3	62.6	60.6
85°	38.1	40.8	38.8	36.8	36.1	36.1	36.8	38.1	36.1
87.5°	17.0	19.1	17.7	16.3	14.3	15.0	15.7	17.0	15.7
90°	1.4	3.4	2.7	2.0	2.0	2.0	2.7	3.4	1.4
92.5°	29.4	33.3	34.3	31.4	31.4	30.4	28.4	27.4	17.6
95°	64.7	70.6	71.6	71.6	69.6	67.6	65.7	60.8	50.0
97.5°	104.9	111.7	113.7	111.7	112.7	110.8	105.9	101.0	90.2
100°	151.0	159.8	161.7	159.8	160.8	155.9	153.9	149.0	136.3
102.5°	201.9	212.7	213.7	211.7	211.7	207.8	205.8	200.0	187.2
105°	259.8	271.5	272.5	268.6	268.6	264.7	262.7	256.8	242.1
107.5°	318.6	330.3	330.3	326.4	326.4	323.5	319.6	315.6	300.9
110°	379.3	389.1	391.1	386.2	385.2	382.3	378.4	372.5	359.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	440.1	449.9	451.9	446.0	445.0	439.1	438.2	431.3	418.6
115°	500.9	510.7	513.6	506.8	504.8	498.0	498.0	491.1	479.3
117.5°	559.7	571.5	574.4	566.6	565.6	559.7	555.8	549.9	537.2
120°	618.5	633.2	635.2	626.4	625.4	618.5	616.6	608.7	596.0
122.5°	677.3	692.0	695.0	687.1	684.2	675.4	674.4	667.5	653.8
125°	733.2	749.9	749.9	746.0	743.0	736.1	732.2	724.4	710.7
127.5°	791.0	808.7	807.7	804.8	801.8	792.0	789.1	781.2	766.5
130°	847.9	863.6	863.6	861.6	859.7	850.8	845.9	838.1	821.4
132.5°	903.8	919.5	921.4	916.5	914.6	902.8	903.8	894.0	877.3
135°	958.7	972.4	977.3	969.4	968.5	955.7	959.6	946.9	930.2
137.5°	1012.6	1023.4	1032.2	1022.4	1021.4	1008.7	1014.5	997.9	983.2
140°	1065.5	1074.3	1086.1	1074.3	1072.4	1060.6	1066.5	1048.8	1036.1
142.5°	1115.5	1123.3	1138.0	1125.3	1122.4	1111.6	1118.4	1097.9	1086.1
145°	1163.5	1169.4	1189.0	1175.3	1171.4	1161.6	1170.4	1144.9	1136.1
147.5°	1211.6	1214.5	1237.0	1224.3	1218.4	1210.6	1219.4	1191.0	1184.1
150°	1256.7	1256.7	1279.2	1269.4	1264.5	1255.7	1261.6	1234.1	1229.2
152.5°	1298.8	1296.8	1317.4	1311.5	1308.6	1298.8	1300.8	1275.3	1272.3
155°	1338.0	1334.1	1352.7	1349.8	1347.8	1338.0	1338.0	1312.5	1313.5
157.5°	1375.3	1367.4	1385.1	1384.1	1380.2	1372.3	1370.4	1347.8	1350.8
160°	1407.6	1400.7	1412.5	1410.5	1407.6	1399.8	1399.8	1380.2	1385.1
162.5°	1436.0	1427.2	1437.0	1431.1	1430.2	1421.3	1425.2	1408.6	1415.4
165°	1460.5	1451.7	1456.6	1448.8	1447.8	1440.0	1446.8	1435.1	1442.9
167.5°	1482.1	1472.3	1471.3	1464.5	1462.5	1456.6	1464.5	1457.6	1466.4
170°	1498.8	1489.0	1486.0	1474.3	1472.3	1467.4	1479.2	1477.2	1485.0
172.5°	1511.5	1501.7	1494.8	1481.1	1474.3	1475.2	1490.9	1490.9	1499.7
175°	1520.3	1509.5	1501.7	1488.0	1475.2	1483.1	1499.7	1500.7	1510.5
177.5°	1522.3	1511.5	1504.6	1491.9	1487.0	1488.0	1505.6	1505.6	1516.4
180°	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7

(END OF REPORT)