

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: P199485

Luminaire Tested: **S124-DIP-U2-1-35-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199485  
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-U2-1-35-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-3500K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL1-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7082.4 lumens  
Efficiency: N/A  
Efficacy: 108.1 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

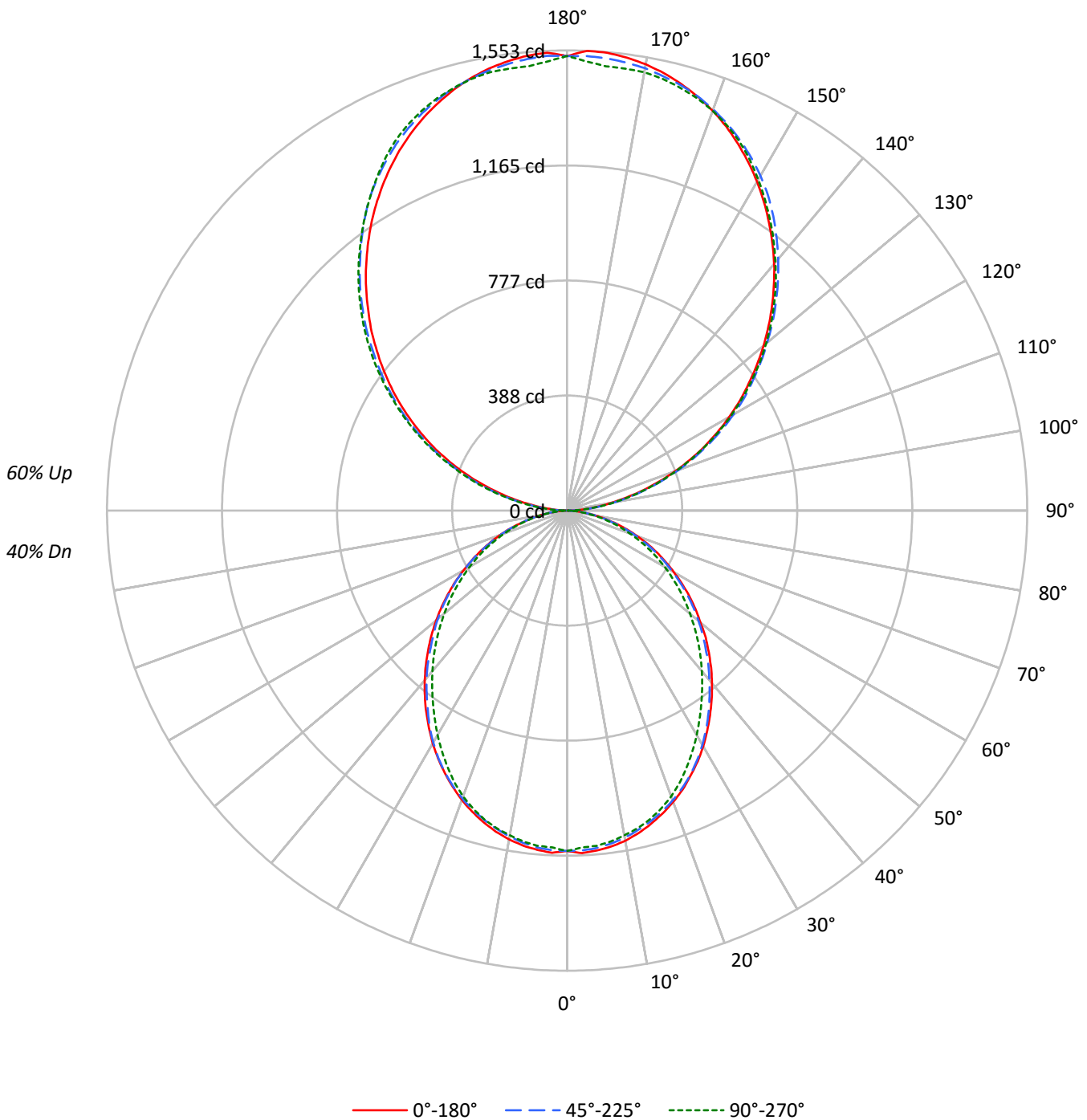
Input Watts (W): 65.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P199485

CATALOG NUMBER: S124-DIP-U2-1-35-X-X0048-1D-UDD-1-5-W

### Luminous Intensity Polar Plot





TEST NUMBER: P199485

CATALOG NUMBER: S124-DIP-U2-1-35-X-X0048-1D-UDD-1-5-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	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°	9085	9085	9085
5°	9069	8207	9053
10°	8941	7456	8903
15°	8747	6786	8703
20°	8524	6130	8462
25°	8253	5466	8178
30°	7969	4841	7866
35°	7630	4265	7523
40°	7289	3755	7164
45°	6922	3286	6787
50°	6508	2844	6393
55°	6138	2432	5977
60°	5677	2038	5516
65°	5223	1653	5017
70°	4642	1272	4424
75°	3905	894	3620
80°	2932	544	2746
85°	1722	241	1629



TEST NUMBER: P199485

CATALOG NUMBER: S124-DIP-U2-1-35-X-X0048-1D-UDD-1-5-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.2	1.5
10°-20°	304.9	4.3
20°-30°	446.7	6.3
30°-40°	511.9	7.2
40°-50°	504.7	7.1
50°-60°	435.0	6.1
60°-70°	317.2	4.5
70°-80°	173.0	2.4
80°-90°	45.4	0.6
90°-100°	78.8	1.1
100°-110°	286.0	4.0
110°-120°	506.3	7.1
120°-130°	673.1	9.5
130°-140°	756.9	10.7
140°-150°	744.2	10.5
150°-160°	628.1	8.9
160°-170°	416.6	5.9
170°-180°	145.2	2.1
0°-30°	859.8	12.1
0°-40°	1371.7	19.4
0°-60°	2311.5	32.6
0°-90°	2847.1	40.2
90°-120°	871.1	12.3
90°-150°	3045.4	43.0
90°-180°	4235.0	59.8
0°-180°	7082.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1149	1149	1149	1149	1149	
5°	1152	1143	1136	1142	1150	109
15°	1095	1086	1079	1081	1089	308
25°	986	984	955	975	977	454
35°	841	832	790	820	829	526
45°	676	662	624	651	663	521
55°	504	495	460	485	490	449
65°	334	326	301	318	321	330
75°	172	165	152	158	159	182
85°	39	40	37	38	37	44
90°	1	3	2	3	1	7
95°	66	73	71	67	51	72
105°	265	278	274	268	247	281
115°	511	524	515	508	489	505
125°	748	765	758	747	725	670
135°	978	997	988	979	949	754
145°	1187	1213	1195	1194	1159	743
155°	1365	1380	1375	1365	1340	629
165°	1490	1486	1477	1476	1472	420
175°	1551	1532	1505	1530	1541	147
180°	1534	1534	1534	1534	1534	



TEST NUMBER: P199485

CATALOG NUMBER: S124-DIP-U2-1-35-X-X0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8
2.5°	1157.1	1143.9	1148.1	1145.3	1137.7	1145.3	1147.4	1143.3	1155.8
5°	1151.6	1139.1	1143.3	1139.1	1135.6	1138.4	1141.9	1137.0	1149.5
7.5°	1143.3	1130.1	1133.5	1130.1	1126.6	1129.4	1131.4	1127.3	1140.5
10°	1131.4	1117.6	1121.0	1116.9	1112.7	1115.5	1117.6	1113.4	1126.6
12.5°	1114.8	1101.6	1104.4	1101.6	1098.1	1098.8	1100.2	1096.0	1109.9
15°	1094.6	1081.4	1086.3	1083.5	1078.7	1081.4	1080.7	1075.9	1089.1
17.5°	1071.7	1059.2	1064.8	1062.0	1055.0	1059.2	1059.2	1051.6	1065.5
20°	1046.7	1033.5	1041.2	1034.2	1026.6	1030.7	1034.2	1025.2	1039.1
22.5°	1018.9	1005.0	1014.1	1001.6	993.2	998.1	1006.4	996.7	1009.2
25°	986.3	975.2	983.5	966.1	955.0	962.0	975.2	965.4	977.3
27.5°	954.3	943.2	950.2	930.7	915.4	924.5	941.1	932.8	943.2
30°	918.9	909.9	913.4	890.4	874.5	884.2	903.6	898.8	907.1
32.5°	880.0	873.1	873.1	848.8	832.1	843.2	864.0	862.7	868.2
35°	841.1	837.0	832.1	805.7	789.7	800.1	820.3	825.8	829.3
37.5°	801.5	798.8	789.7	764.0	748.7	759.9	778.6	786.9	789.0
40°	760.5	759.2	746.7	722.3	707.1	718.2	737.6	748.0	747.4
42.5°	718.9	720.3	705.0	681.4	666.1	677.2	695.3	709.2	705.7
45°	675.8	680.0	661.9	640.4	624.4	636.2	650.8	668.2	662.6
47.5°	634.1	639.0	620.2	598.0	582.7	595.2	609.8	628.6	620.2
50°	586.9	596.6	578.6	556.3	541.1	552.9	570.2	586.2	576.5
52.5°	545.9	552.9	536.9	515.4	500.8	510.5	527.9	543.8	533.4
55°	503.6	511.2	495.2	473.7	459.8	469.5	484.8	500.8	490.4
57.5°	459.1	466.7	452.2	432.7	419.5	429.9	445.9	457.0	447.3
60°	416.0	425.8	409.8	391.0	379.9	388.3	400.8	414.0	404.2
62.5°	374.4	383.4	368.1	350.8	340.3	348.0	361.2	371.6	362.6
65°	334.1	339.6	326.4	310.5	301.4	306.3	318.1	329.9	320.9
67.5°	293.1	298.7	285.5	271.6	262.5	267.4	277.1	288.2	279.9
70°	251.4	256.3	245.2	232.7	225.0	229.9	238.9	247.3	239.6
72.5°	211.8	215.3	204.9	195.2	189.6	193.1	199.3	207.0	203.5
75°	171.6	175.7	165.3	157.0	152.1	153.5	158.4	164.6	159.1
77.5°	133.4	137.5	129.2	122.9	120.2	120.9	124.3	129.2	122.2
80°	97.9	101.4	96.5	91.0	88.2	89.6	91.7	94.5	91.7
82.5°	66.0	69.5	66.0	62.5	60.4	61.8	62.5	63.9	61.8
85°	38.9	41.7	39.6	37.5	36.8	36.8	37.5	38.9	36.8
87.5°	17.4	19.4	18.1	16.7	14.6	15.3	16.0	17.4	16.0
90°	1.4	3.5	2.8	2.1	2.1	2.1	2.8	3.5	1.4
92.5°	30.0	34.0	35.0	32.0	32.0	31.0	29.0	28.0	18.0
95°	66.0	72.0	73.0	73.0	71.0	69.0	67.0	62.0	51.0
97.5°	107.0	114.0	116.0	114.0	115.0	113.0	108.0	103.0	92.0
100°	154.0	163.0	165.0	163.0	164.0	159.0	157.0	152.0	139.0
102.5°	206.0	217.0	218.0	216.0	216.0	212.0	210.0	204.0	191.0
105°	265.0	277.0	278.0	274.0	274.0	270.0	268.0	262.0	247.0
107.5°	325.0	337.0	337.0	333.0	333.0	330.0	326.0	322.0	307.0
110°	387.0	397.0	399.0	394.0	393.0	390.0	386.0	380.0	367.0



TEST NUMBER: P199485

CATALOG NUMBER: S124-DIP-U2-1-35-X-X0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	449.0	459.0	461.0	455.0	454.0	448.0	447.0	440.0	427.0
115°	511.0	521.0	524.0	517.0	515.0	508.0	508.0	501.0	489.0
117.5°	571.0	583.0	586.0	578.0	577.0	571.0	567.0	561.0	548.0
120°	631.0	646.0	648.0	639.0	638.0	631.0	629.0	621.0	608.0
122.5°	691.0	706.0	709.0	701.0	698.0	689.0	688.0	681.0	667.0
125°	748.0	765.0	765.0	761.0	758.0	751.0	747.0	739.0	725.0
127.5°	807.0	825.0	824.0	821.0	818.0	808.0	805.0	797.0	782.0
130°	865.0	881.0	881.0	879.0	877.0	868.0	863.0	855.0	838.0
132.5°	922.0	938.0	940.0	935.0	933.0	921.0	922.0	912.0	895.0
135°	978.0	992.0	997.0	989.0	988.0	975.0	979.0	966.0	949.0
137.5°	1033.0	1044.0	1053.0	1043.0	1042.0	1029.0	1035.0	1018.0	1003.0
140°	1087.0	1096.0	1108.0	1096.0	1094.0	1082.0	1088.0	1070.0	1057.0
142.5°	1138.0	1146.0	1161.0	1148.0	1145.0	1134.0	1141.0	1120.0	1108.0
145°	1187.0	1193.0	1213.0	1199.0	1195.0	1185.0	1194.0	1168.0	1159.0
147.5°	1236.0	1239.0	1262.0	1249.0	1243.0	1235.0	1244.0	1215.0	1208.0
150°	1282.0	1282.0	1305.0	1295.0	1290.0	1281.0	1287.0	1259.0	1254.0
152.5°	1325.0	1323.0	1344.0	1338.0	1335.0	1325.0	1327.0	1301.0	1298.0
155°	1365.0	1361.0	1380.0	1377.0	1375.0	1365.0	1365.0	1339.0	1340.0
157.5°	1403.0	1395.0	1413.0	1412.0	1408.0	1400.0	1398.0	1375.0	1378.0
160°	1436.0	1429.0	1441.0	1439.0	1436.0	1428.0	1428.0	1408.0	1413.0
162.5°	1465.0	1456.0	1466.0	1460.0	1459.0	1450.0	1454.0	1437.0	1444.0
165°	1490.0	1481.0	1486.0	1478.0	1477.0	1469.0	1476.0	1464.0	1472.0
167.5°	1512.0	1502.0	1501.0	1494.0	1492.0	1486.0	1494.0	1487.0	1496.0
170°	1529.0	1519.0	1516.0	1504.0	1502.0	1497.0	1509.0	1507.0	1515.0
172.5°	1542.0	1532.0	1525.0	1511.0	1504.0	1505.0	1521.0	1521.0	1530.0
175°	1551.0	1540.0	1532.0	1518.0	1505.0	1513.0	1530.0	1531.0	1541.0
177.5°	1553.0	1542.0	1535.0	1522.0	1517.0	1518.0	1536.0	1536.0	1547.0
180°	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0

(END OF REPORT)