

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: P199487

Luminaire Tested: **S124-DIP-U2-1-40-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199487  
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-U2-1-40-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL1-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7311.0 lumens  
Efficiency: N/A  
Efficacy: 111.6 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

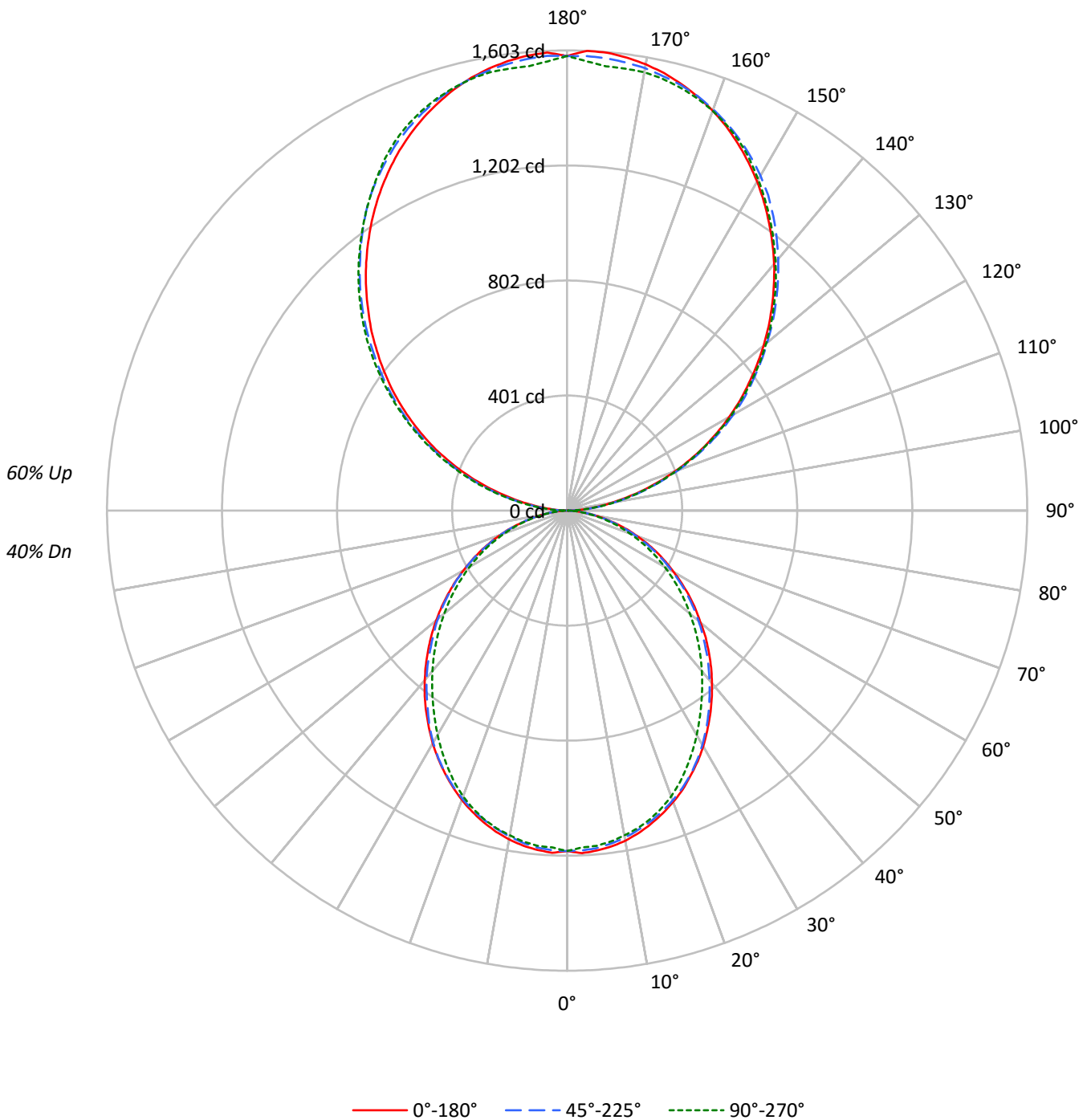
Input Watts (W): 65.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	9378	9378	9378
5°	9362	8472	9345
10°	9230	7697	9190
15°	9029	7005	8983
20°	8799	6327	8735
25°	8519	5643	8441
30°	8226	4997	8120
35°	7876	4402	7766
40°	7525	3876	7395
45°	7146	3393	7006
50°	6719	2936	6599
55°	6336	2510	6170
60°	5861	2104	5694
65°	5392	1706	5178
70°	4791	1313	4568
75°	4030	923	3737
80°	3027	562	2833
85°	1780	249	1682



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.7	1.5
10°-20°	314.8	4.3
20°-30°	461.1	6.3
30°-40°	528.5	7.2
40°-50°	521.0	7.1
50°-60°	449.1	6.1
60°-70°	327.4	4.5
70°-80°	178.6	2.4
80°-90°	46.9	0.6
90°-100°	81.4	1.1
100°-110°	295.2	4.0
110°-120°	522.7	7.1
120°-130°	694.8	9.5
130°-140°	781.4	10.7
140°-150°	768.3	10.5
150°-160°	648.4	8.9
160°-170°	430.1	5.9
170°-180°	149.9	2.1
0°-30°	887.5	12.1
0°-40°	1416.0	19.4
0°-60°	2386.1	32.6
0°-90°	2939.0	40.2
90°-120°	899.2	12.3
90°-150°	3143.7	43.0
90°-180°	4372.0	59.8
0°-180°	7311.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1189	1180	1172	1179	1187	113
15°	1130	1121	1114	1116	1124	318
25°	1018	1015	986	1007	1009	469
35°	868	859	815	847	856	543
45°	698	683	645	672	684	538
55°	520	511	475	500	506	464
65°	345	337	311	328	331	341
75°	177	171	157	164	164	188
85°	40	41	38	39	38	46
90°	1	3	2	3	1	7
95°	68	75	73	69	53	74
105°	274	287	283	277	255	290
115°	528	541	532	524	505	521
125°	772	790	782	771	748	691
135°	1010	1029	1020	1011	980	779
145°	1225	1252	1234	1232	1196	767
155°	1409	1424	1419	1409	1383	649
165°	1538	1534	1525	1524	1520	434
175°	1601	1582	1554	1579	1591	152
180°	1584	1584	1584	1584	1584	



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CATALOG NUMBER: S124-DIP-U2-1-40-X-X0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9
2.5°	1194.5	1180.9	1185.2	1182.3	1174.4	1182.3	1184.5	1180.2	1193.1
5°	1188.8	1175.9	1180.2	1175.9	1172.3	1175.1	1178.7	1173.7	1186.6
7.5°	1180.2	1166.5	1170.1	1166.5	1163.0	1165.8	1168.0	1163.7	1177.3
10°	1168.0	1153.6	1157.2	1152.9	1148.6	1151.5	1153.6	1149.3	1163.0
12.5°	1150.8	1137.1	1140.0	1137.1	1133.6	1134.3	1135.7	1131.4	1145.7
15°	1130.0	1116.3	1121.4	1118.5	1113.5	1116.3	1115.6	1110.6	1124.2
17.5°	1106.3	1093.4	1099.1	1096.3	1089.1	1093.4	1093.4	1085.5	1099.9
20°	1080.5	1066.9	1074.8	1067.6	1059.7	1064.0	1067.6	1058.3	1072.6
22.5°	1051.8	1037.5	1046.8	1033.9	1025.3	1030.3	1038.9	1028.9	1041.8
25°	1018.1	1006.6	1015.3	997.3	985.9	993.0	1006.6	996.6	1008.8
27.5°	985.1	973.7	980.8	960.8	945.0	954.3	971.5	962.9	973.7
30°	948.6	939.3	942.8	919.2	902.7	912.7	932.8	927.8	936.4
32.5°	908.4	901.3	901.3	876.2	858.9	870.4	891.9	890.5	896.2
35°	868.3	864.0	858.9	831.7	815.2	826.0	846.8	852.5	856.1
37.5°	827.4	824.5	815.2	788.7	772.9	784.4	803.7	812.3	814.5
40°	785.1	783.7	770.8	745.7	729.9	741.4	761.4	772.2	771.5
42.5°	742.1	743.5	727.7	703.4	687.6	699.1	717.7	732.0	728.5
45°	697.6	701.9	683.3	661.1	644.6	656.8	671.8	689.7	684.0
47.5°	654.6	659.6	640.3	617.3	601.6	614.5	629.5	648.9	640.3
50°	605.9	615.9	597.2	574.3	558.5	570.7	588.6	605.1	595.1
52.5°	563.6	570.7	554.2	532.0	516.9	527.0	544.9	561.4	550.6
55°	519.8	527.7	511.2	489.0	474.6	484.7	500.5	516.9	506.2
57.5°	473.9	481.8	466.8	446.7	433.1	443.8	460.3	471.8	461.7
60°	429.5	439.5	423.0	403.7	392.2	400.8	413.7	427.3	417.3
62.5°	386.5	395.8	380.0	362.1	351.3	359.2	372.8	383.6	374.3
65°	344.9	350.6	337.0	320.5	311.2	316.2	328.4	340.6	331.2
67.5°	302.6	308.3	294.7	280.3	271.0	276.0	286.1	297.5	288.9
70°	259.5	264.6	253.1	240.2	232.3	237.3	246.6	255.2	247.4
72.5°	218.7	222.3	211.5	201.5	195.7	199.3	205.8	213.7	210.1
75°	177.1	181.4	170.6	162.0	157.0	158.5	163.5	169.9	164.2
77.5°	137.7	142.0	133.4	126.9	124.0	124.8	128.3	133.4	126.2
80°	101.1	104.7	99.7	93.9	91.1	92.5	94.6	97.5	94.6
82.5°	68.1	71.7	68.1	64.5	62.4	63.8	64.5	66.0	63.8
85°	40.2	43.0	40.9	38.7	38.0	38.0	38.7	40.2	38.0
87.5°	17.9	20.1	18.6	17.2	15.1	15.8	16.5	17.9	16.5
90°	1.4	3.6	2.9	2.2	2.2	2.2	2.9	3.6	1.4
92.5°	31.0	35.1	36.1	33.0	33.0	32.0	29.9	28.9	18.6
95°	68.1	74.3	75.4	75.4	73.3	71.2	69.2	64.0	52.6
97.5°	110.5	117.7	119.7	117.7	118.7	116.6	111.5	106.3	95.0
100°	159.0	168.3	170.3	168.3	169.3	164.1	162.1	156.9	143.5
102.5°	212.6	224.0	225.0	223.0	223.0	218.8	216.8	210.6	197.2
105°	273.6	285.9	287.0	282.8	282.8	278.7	276.7	270.5	255.0
107.5°	335.5	347.9	347.9	343.7	343.7	340.7	336.5	332.4	316.9
110°	399.5	409.8	411.9	406.7	405.7	402.6	398.5	392.3	378.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	463.5	473.8	475.9	469.7	468.7	462.5	461.4	454.2	440.8
115°	527.5	537.8	540.9	533.7	531.6	524.4	524.4	517.2	504.8
117.5°	589.4	601.8	604.9	596.7	595.6	589.4	585.3	579.1	565.7
120°	651.4	666.9	668.9	659.6	658.6	651.4	649.3	641.0	627.6
122.5°	713.3	728.8	731.9	723.6	720.5	711.2	710.2	703.0	688.5
125°	772.1	789.7	789.7	785.6	782.5	775.2	771.1	762.9	748.4
127.5°	833.0	851.6	850.6	847.5	844.4	834.1	831.0	822.7	807.2
130°	892.9	909.4	909.4	907.4	905.3	896.0	890.9	882.6	865.0
132.5°	951.8	968.3	970.3	965.2	963.1	950.7	951.8	941.4	923.9
135°	1009.6	1024.0	1029.2	1020.9	1019.9	1006.5	1010.6	997.2	979.6
137.5°	1066.3	1077.7	1087.0	1076.7	1075.6	1062.2	1068.4	1050.9	1035.4
140°	1122.1	1131.4	1143.8	1131.4	1129.3	1116.9	1123.1	1104.5	1091.1
142.5°	1174.7	1183.0	1198.5	1185.1	1182.0	1170.6	1177.8	1156.2	1143.8
145°	1225.3	1231.5	1252.2	1237.7	1233.6	1223.3	1232.5	1205.7	1196.4
147.5°	1275.9	1279.0	1302.7	1289.3	1283.1	1274.9	1284.2	1254.2	1247.0
150°	1323.4	1323.4	1347.1	1336.8	1331.6	1322.3	1328.5	1299.6	1294.5
152.5°	1367.8	1365.7	1387.4	1381.2	1378.1	1367.8	1369.8	1343.0	1339.9
155°	1409.1	1404.9	1424.5	1421.4	1419.4	1409.1	1409.1	1382.2	1383.3
157.5°	1448.3	1440.0	1458.6	1457.6	1453.4	1445.2	1443.1	1419.4	1422.5
160°	1482.4	1475.1	1487.5	1485.4	1482.4	1474.1	1474.1	1453.4	1458.6
162.5°	1512.3	1503.0	1513.3	1507.1	1506.1	1496.8	1500.9	1483.4	1490.6
165°	1538.1	1528.8	1534.0	1525.7	1524.7	1516.4	1523.6	1511.3	1519.5
167.5°	1560.8	1550.5	1549.5	1542.2	1540.2	1534.0	1542.2	1535.0	1544.3
170°	1578.4	1568.0	1564.9	1552.5	1550.5	1545.3	1557.7	1555.6	1563.9
172.5°	1591.8	1581.5	1574.2	1559.8	1552.5	1553.6	1570.1	1570.1	1579.4
175°	1601.1	1589.7	1581.5	1567.0	1553.6	1561.8	1579.4	1580.4	1590.7
177.5°	1603.1	1591.8	1584.5	1571.1	1566.0	1567.0	1585.6	1585.6	1596.9
180°	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5	1583.5

(END OF REPORT)