

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: P199391

Luminaire Tested: **S122-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: P199391  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27986)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIP-U1-2-30-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 2-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: 6597.2 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

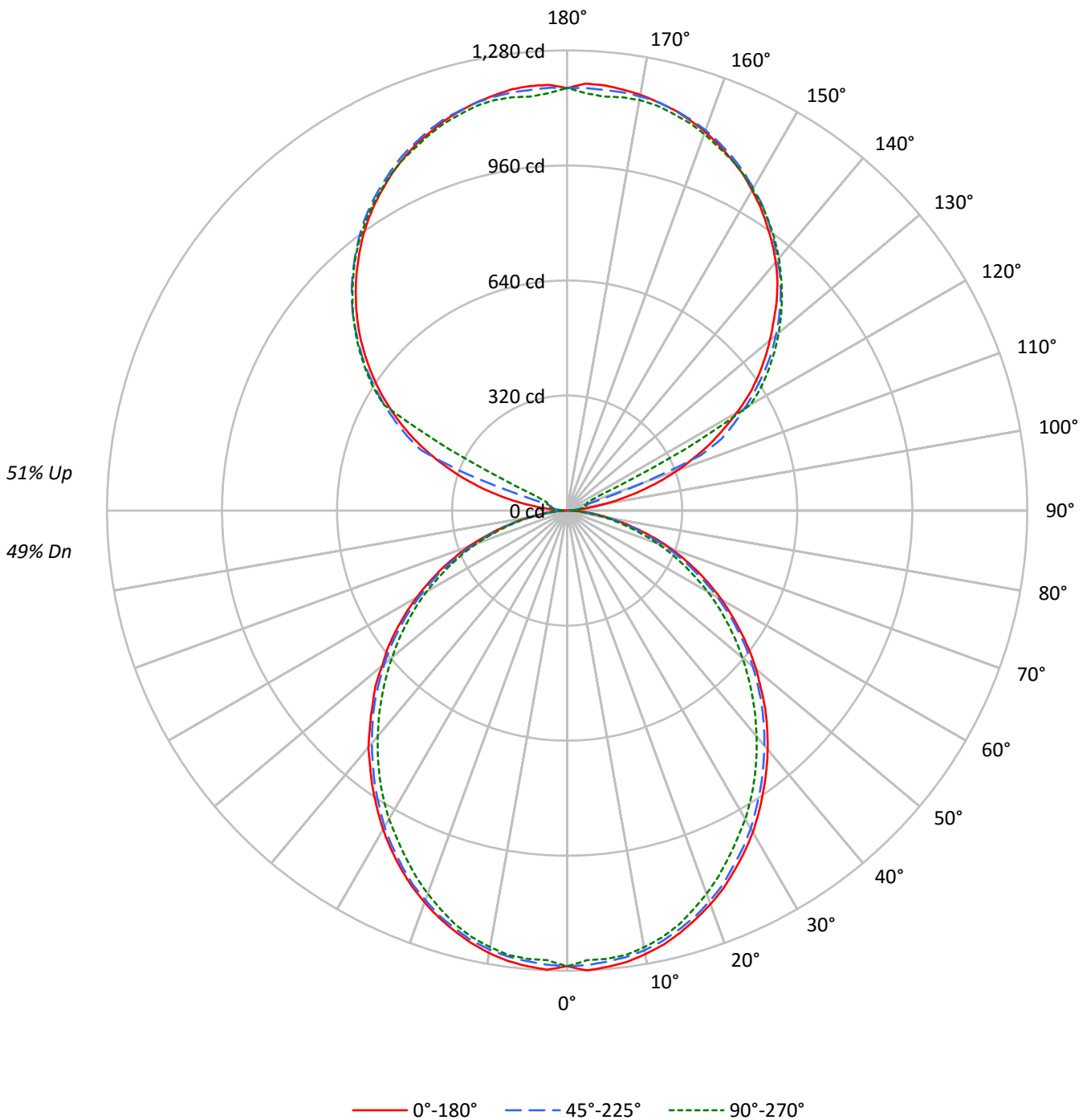
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	98	93	90	86	90	86	83	80	73	70	68	61	59	57	49	48	47	42
2	89	82	75	70	82	75	70	66	64	60	57	53	50	48	43	41	40	35
3	81	72	64	59	75	66	60	55	56	52	48	47	44	41	38	36	34	30
4	74	63	56	50	68	59	52	46	50	45	41	42	38	35	34	31	29	25
5	68	57	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	43	37	58	47	40	35	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	43	35	30	37	31	27	31	27	23	26	22	20	17
8	54	42	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15
9	50	38	30	25	46	35	29	24	31	25	21	26	22	19	22	18	16	14
10	47	35	28	23	43	32	26	22	28	23	19	24	20	17	20	17	15	13

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

	0°	90°	180°
0°	20045	20045	20045
5°	20070	16604	20039
10°	19798	14179	19752
15°	19425	12196	19346
20°	18982	10494	18886
25°	18455	9057	18356
30°	17919	7872	17765
35°	17267	6812	17107
40°	16629	5859	16480
45°	15965	5012	15684
50°	15219	4252	14893
55°	14385	3560	14146
60°	13536	2919	13190
65°	12503	2292	12075
70°	11222	1723	10679
75°	9366	1160	8743
80°	6983	674	6342
85°	4338	266	3648



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.5	1.8
10°-20°	338.3	5.1
20°-30°	498.9	7.6
30°-40°	581.8	8.8
40°-50°	583.1	8.8
50°-60°	510.0	7.7
60°-70°	375.3	5.7
70°-80°	203.4	3.1
80°-90°	52.1	0.8
90°-100°	29.4	0.4
100°-110°	132.0	2.0
110°-120°	383.6	5.8
120°-130°	599.4	9.1
130°-140°	646.2	9.8
140°-150°	610.7	9.3
150°-160°	498.0	7.5
160°-170°	324.1	4.9
170°-180°	111.7	1.7
0°-30°	956.7	14.5
0°-40°	1538.5	23.3
0°-60°	2631.6	39.9
0°-90°	3262.4	49.5
90°-120°	544.9	8.3
90°-150°	2401.1	36.4
90°-180°	3335.0	50.6
0°-180°	6597.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1267	1267	1267	1267	1267	
5°	1274	1260	1252	1259	1272	121
15°	1216	1206	1194	1204	1211	343
25°	1103	1092	1064	1089	1097	508
35°	952	939	909	932	943	596
45°	779	766	728	758	766	600
55°	590	579	544	568	580	528
65°	400	384	357	372	386	396
75°	206	196	178	183	192	219
85°	49	46	39	40	41	55
90°	2	5	7	6	1	4
95°	29	23	27	27	50	40
105°	212	45	54	46	249	225
115°	438	475	97	491	468	431
125°	648	668	684	679	664	577
135°	824	840	845	848	831	635
145°	969	978	979	984	972	607
155°	1079	1086	1078	1087	1080	498
165°	1153	1154	1142	1152	1151	325
175°	1187	1174	1156	1174	1185	113
180°	1175	1175	1175	1175	1175	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4
2.5°	1280.2	1262.5	1265.5	1261.6	1251.7	1260.6	1264.5	1261.6	1278.2
5°	1274.3	1256.7	1259.6	1254.7	1251.7	1254.7	1258.6	1254.7	1272.3
7.5°	1266.5	1246.8	1252.7	1249.8	1246.8	1248.8	1251.7	1244.9	1263.5
10°	1252.7	1233.1	1241.9	1236.1	1233.1	1235.1	1240.0	1230.2	1249.8
12.5°	1237.0	1217.4	1226.3	1219.4	1216.5	1216.5	1225.3	1214.5	1232.1
15°	1215.5	1199.8	1205.7	1198.8	1193.9	1196.9	1203.7	1195.9	1210.6
17.5°	1191.0	1177.3	1184.1	1173.3	1164.5	1171.4	1181.2	1172.4	1187.1
20°	1165.5	1149.8	1156.7	1142.0	1134.1	1140.0	1152.7	1145.9	1159.6
22.5°	1137.1	1122.4	1128.2	1108.6	1100.8	1105.7	1124.3	1117.5	1130.2
25°	1102.8	1091.0	1092.0	1072.4	1063.5	1069.4	1089.0	1085.1	1096.9
27.5°	1069.4	1057.7	1058.6	1036.1	1026.3	1034.1	1053.7	1050.8	1061.6
30°	1033.2	1022.4	1021.4	998.9	991.0	995.9	1015.5	1015.5	1024.3
32.5°	993.0	984.1	979.2	958.7	950.8	956.7	973.4	976.3	983.2
35°	951.8	945.9	939.1	919.5	908.7	916.5	932.2	936.1	943.0
37.5°	910.6	903.8	895.9	876.3	864.6	874.4	888.1	894.9	899.8
40°	867.5	862.6	853.8	834.2	819.5	829.3	845.0	852.8	859.7
42.5°	823.4	820.4	809.7	789.1	774.4	785.2	801.8	808.7	811.6
45°	779.3	775.4	765.6	744.0	728.3	740.1	757.7	764.6	765.6
47.5°	730.3	731.2	719.5	697.9	682.2	694.0	709.7	719.5	723.4
50°	686.2	687.1	673.4	651.9	636.2	645.0	663.6	673.4	671.5
52.5°	639.1	642.0	627.3	605.8	590.1	598.9	617.5	628.3	629.3
55°	590.1	595.0	579.3	557.7	544.0	552.8	568.5	581.3	580.3
57.5°	543.0	547.0	531.3	511.7	498.0	505.8	519.5	536.2	532.3
60°	496.0	499.9	483.3	463.6	451.9	455.8	471.5	485.2	483.3
62.5°	448.0	451.9	434.2	416.6	402.9	408.8	422.5	439.1	434.2
65°	399.9	402.9	384.2	368.6	356.8	362.7	372.5	390.1	386.2
67.5°	351.9	353.9	337.2	322.5	312.7	315.6	324.5	339.2	337.2
70°	303.9	305.8	290.1	276.4	267.6	270.5	277.4	291.1	289.2
72.5°	254.9	257.8	242.1	229.4	220.6	223.5	228.4	241.1	238.2
75°	205.8	207.8	196.0	186.2	178.4	179.4	183.3	193.1	192.1
77.5°	160.8	165.7	152.9	144.1	138.2	139.2	144.1	149.0	147.0
80°	116.6	122.5	113.7	106.8	101.9	101.0	104.9	108.8	105.9
82.5°	82.3	83.3	77.4	72.5	67.6	67.6	70.6	73.5	70.6
85°	49.0	51.0	46.1	42.1	39.2	38.2	40.2	43.1	41.2
87.5°	23.5	24.5	19.6	17.6	14.7	13.7	14.7	16.7	16.7
90°	2.0	4.9	4.9	5.9	6.9	6.9	5.9	5.9	1.0
92.5°	4.1	9.5	9.5	11.6	12.3	14.3	16.3	17.0	18.4
95°	28.6	20.4	23.1	25.2	26.6	28.6	27.2	25.2	49.7
97.5°	64.0	25.9	32.7	34.0	36.1	36.8	36.8	28.6	90.6
100°	106.9	30.0	38.8	44.3	45.6	45.6	41.5	64.0	139.6
102.5°	157.3	133.4	42.2	49.0	51.7	49.7	44.3	217.2	194.0
105°	211.7	240.3	44.9	51.7	54.5	53.1	46.3	267.6	249.2
107.5°	268.9	291.4	47.7	54.5	57.2	55.1	56.5	319.3	304.3
110°	326.1	345.2	213.8	56.5	59.2	56.5	296.2	371.7	359.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	380.6	400.3	401.7	59.9	60.6	64.7	440.5	424.8	414.6
115°	437.8	454.1	475.2	276.4	96.7	304.3	490.9	477.3	468.4
117.5°	490.2	505.9	522.2	486.1	370.4	529.0	539.2	529.0	520.2
120°	545.3	561.0	571.2	587.6	588.9	588.9	586.9	578.7	569.2
122.5°	599.8	610.0	618.2	634.5	640.0	633.9	632.5	625.0	617.5
125°	647.5	657.0	667.9	678.8	684.2	678.1	678.8	669.3	663.8
127.5°	692.4	700.6	714.9	721.7	727.1	720.3	723.0	712.8	708.7
130°	736.0	741.4	757.8	763.2	768.0	763.9	765.9	755.0	751.6
132.5°	778.9	786.4	800.0	802.0	807.5	801.3	808.8	793.8	792.5
135°	823.8	829.9	840.1	840.8	844.9	841.5	847.6	835.4	831.3
137.5°	866.0	868.7	877.6	874.9	881.0	875.5	884.4	872.1	869.4
140°	902.8	904.8	911.0	912.3	916.4	911.6	918.4	906.2	904.8
142.5°	936.8	939.5	945.0	944.3	949.1	944.3	952.5	941.6	940.2
145°	968.8	972.9	977.7	975.6	979.0	976.3	984.5	972.9	972.2
147.5°	1000.8	1002.2	1009.0	1005.6	1007.6	1004.2	1013.1	1003.5	1002.2
150°	1028.7	1031.5	1035.5	1031.5	1032.1	1030.1	1038.9	1030.8	1029.4
152.5°	1056.7	1056.0	1062.1	1053.9	1057.3	1053.9	1064.1	1056.0	1056.0
155°	1079.1	1078.4	1085.9	1077.1	1078.4	1075.7	1087.3	1077.8	1079.8
157.5°	1101.6	1098.2	1107.0	1098.2	1095.5	1097.5	1106.4	1097.5	1101.6
160°	1121.3	1117.9	1126.1	1116.6	1114.5	1115.9	1125.4	1117.2	1118.6
162.5°	1138.4	1133.6	1141.1	1130.9	1130.9	1128.8	1141.1	1132.9	1137.0
165°	1153.3	1147.9	1154.0	1143.8	1142.4	1141.1	1152.0	1146.5	1150.6
167.5°	1164.2	1158.8	1164.2	1152.6	1154.0	1151.3	1162.2	1158.8	1163.5
170°	1174.4	1167.6	1169.7	1159.5	1159.5	1157.4	1169.0	1165.6	1172.4
172.5°	1181.2	1173.8	1173.8	1162.2	1159.5	1160.8	1173.1	1172.4	1181.9
175°	1187.4	1177.2	1174.4	1163.5	1156.1	1162.9	1174.4	1176.5	1185.3
177.5°	1188.7	1179.2	1176.5	1164.2	1162.2	1162.9	1177.2	1177.8	1185.3
180°	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1

(END OF REPORT)