

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: P199443

Luminaire Tested: **S123-DIW-U1-2-40-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199443
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27889 P27889)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123-DIW-U1-2-40-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL1-4000K, NO LENS
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

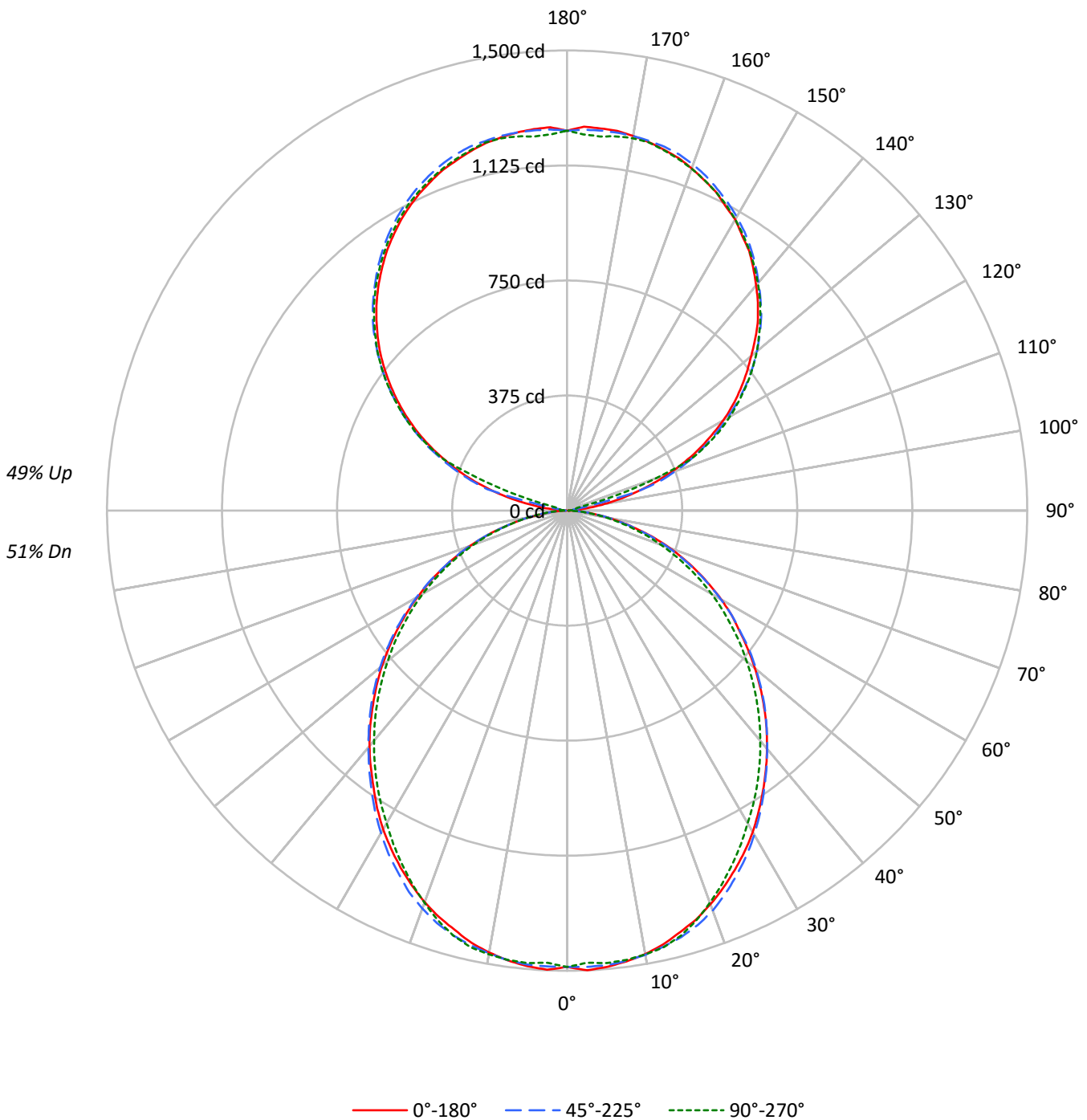
Lumens per Lamp: N/A
Luminaire Lumens: 7571.6 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): 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										
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	50	30	10	50	30	10	0														
RCR																																						
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	43	43	43	51														
1	98	94	90	86	91	87	84	80	74	71	69	62	60	59	51	50	49	43	43	43	36	36	36	43														
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	45	43	41	36	36	36	31	31	31	36														
3	82	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31	31	31	26	26	26	31														
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	26	26	23	23	23	26														
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23	23	23	20	20	20	23														
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20	20	20	18	18	18	20														
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18	18	18	16	16	16	18														
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	16	16	14	14	14	16														
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	17	14	14	14	13	13	13	14														
10	47	35	28	23	44	33	26	22	29	23	19	25	20	17	21	17	15	13	13	13	13	13	13	13														

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	15685	15685	15685
5°	15674	13851	15652
10°	15466	12438	15411
15°	15155	11164	15079
20°	14829	9875	14751
25°	14419	8713	14327
30°	13988	7678	13869
35°	13471	6792	13309
40°	12955	5970	12809
45°	12407	5209	12224
50°	11814	4495	11645
55°	11157	3817	10972
60°	10555	3188	10236
65°	9747	2559	9359
70°	8742	1951	8284
75°	7330	1345	6796
80°	5482	804	4903
85°	3105	344	2745



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	1.9
10°-20°	402.6	5.3
20°-30°	595.0	7.9
30°-40°	692.5	9.1
40°-50°	695.0	9.2
50°-60°	608.3	8.0
60°-70°	449.3	5.9
70°-80°	245.4	3.2
80°-90°	63.4	0.8
90°-100°	29.1	0.4
100°-110°	203.9	2.7
110°-120°	487.9	6.4
120°-130°	631.5	8.3
130°-140°	685.4	9.1
140°-150°	648.9	8.6
150°-160°	530.0	7.0
160°-170°	344.3	4.5
170°-180°	118.1	1.6
0°-30°	1138.7	15.0
0°-40°	1831.2	24.2
0°-60°	3134.4	41.4
0°-90°	3892.5	51.4
90°-120°	720.8	9.5
90°-150°	2686.6	35.5
90°-180°	3679.0	48.6
0°-180°	7571.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1488	1488	1488	1488	1488	
5°	1493	1488	1480	1485	1491	142
15°	1422	1439	1434	1434	1415	401
25°	1292	1310	1273	1303	1284	595
35°	1114	1118	1082	1112	1100	697
45°	908	912	873	904	895	701
55°	686	690	652	683	675	616
65°	468	462	432	451	449	462
75°	242	236	218	223	224	257
85°	53	57	52	51	46	61
90°	3	6	4	5	2	5
95°	37	16	18	17	44	48
105°	234	230	35	270	254	249
115°	475	493	499	506	490	468
125°	690	711	714	713	700	616
135°	880	895	890	896	879	676
145°	1034	1044	1036	1045	1027	645
155°	1146	1157	1146	1159	1140	528
165°	1218	1228	1216	1228	1213	344
175°	1250	1243	1224	1244	1248	119
180°	1238	1238	1238	1238	1238	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5
2.5°	1499.9	1484.4	1488.5	1486.5	1475.1	1486.5	1487.5	1483.4	1497.8
5°	1492.7	1479.3	1487.5	1484.4	1480.3	1484.4	1485.4	1477.2	1490.6
7.5°	1482.4	1471.0	1480.3	1479.3	1477.2	1479.3	1478.2	1466.9	1479.3
10°	1467.9	1457.6	1470.0	1472.0	1468.9	1471.0	1465.8	1454.5	1462.7
12.5°	1448.3	1440.0	1455.5	1459.6	1457.6	1458.6	1451.4	1434.9	1443.1
15°	1422.5	1418.4	1439.0	1442.1	1433.8	1439.0	1433.8	1413.2	1415.3
17.5°	1397.7	1393.6	1416.3	1412.2	1400.8	1409.1	1410.1	1387.4	1389.4
20°	1365.7	1363.6	1387.4	1375.0	1360.5	1370.9	1380.2	1357.4	1358.5
22.5°	1330.6	1332.7	1350.2	1332.7	1318.2	1328.5	1346.1	1324.4	1322.3
25°	1292.4	1298.6	1310.0	1289.3	1272.8	1284.2	1302.7	1290.3	1284.2
27.5°	1253.2	1262.5	1266.6	1242.9	1226.3	1237.7	1261.4	1253.2	1242.9
30°	1209.8	1221.2	1220.2	1195.4	1176.8	1189.2	1214.0	1212.9	1199.5
32.5°	1162.3	1177.8	1169.6	1145.8	1130.3	1139.6	1164.4	1167.5	1152.0
35°	1113.8	1130.3	1118.0	1095.2	1081.8	1091.1	1111.8	1121.1	1100.4
37.5°	1064.3	1080.8	1066.3	1044.7	1031.2	1040.5	1060.2	1071.5	1051.9
40°	1013.7	1029.2	1014.7	996.1	979.6	990.0	1007.5	1019.9	1002.3
42.5°	962.1	978.6	963.1	944.5	927.0	940.4	955.9	968.3	949.7
45°	908.4	926.0	911.5	889.8	873.3	886.7	904.3	914.6	895.0
47.5°	853.7	874.3	857.8	835.1	818.6	832.0	850.6	860.9	842.3
50°	799.0	816.5	804.1	780.4	763.9	776.3	796.9	805.2	787.6
52.5°	743.2	763.9	749.4	725.7	710.2	720.5	740.1	749.4	730.9
55°	686.5	703.0	689.6	669.9	652.4	664.8	683.4	689.6	675.1
57.5°	636.9	649.3	636.9	615.2	598.7	608.0	625.6	633.8	619.4
60°	580.1	591.5	579.1	558.5	544.0	552.3	566.7	577.0	562.6
62.5°	523.4	534.7	520.3	501.7	488.3	497.6	509.9	519.2	505.8
65°	467.6	477.9	462.5	445.9	432.5	441.8	451.1	461.4	449.0
67.5°	410.8	420.1	405.7	389.2	377.8	385.0	393.3	403.6	393.3
70°	355.1	362.3	349.9	334.5	324.1	330.3	337.6	345.8	336.5
72.5°	299.4	308.7	293.2	280.8	271.5	273.6	281.8	288.0	280.8
75°	241.6	247.7	236.4	226.1	217.8	219.9	223.0	232.3	224.0
77.5°	187.9	195.1	185.8	176.5	170.3	172.4	173.4	179.6	171.4
80°	137.3	143.5	137.3	130.1	125.9	127.0	127.0	131.1	122.8
82.5°	91.9	98.1	93.9	88.8	87.7	85.7	85.7	88.8	80.5
85°	52.6	59.9	56.8	52.6	51.6	50.6	50.6	52.6	46.5
87.5°	23.7	28.9	25.8	22.7	20.6	19.6	19.6	22.7	17.5
90°	3.1	7.2	6.2	4.1	4.1	4.1	5.2	6.2	2.1
92.5°	7.9	9.3	9.3	9.3	9.3	10.8	11.5	11.5	13.6
95°	36.6	13.6	15.8	17.2	17.9	17.9	17.2	15.1	44.5
97.5°	76.0	60.2	19.4	21.5	22.9	22.2	20.8	76.7	86.0
100°	123.3	139.8	21.5	24.4	25.8	25.1	23.7	157.0	136.2
102.5°	175.7	195.0	77.4	27.2	28.0	27.2	118.3	211.5	194.3
105°	234.5	250.9	230.2	45.9	35.1	55.9	269.6	267.4	253.8
107.5°	294.0	310.5	314.0	203.6	184.3	213.7	329.8	325.5	315.5
110°	354.9	367.1	375.0	378.6	309.0	383.6	388.6	382.9	374.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	415.9	428.8	435.9	440.9	435.2	444.5	446.0	440.2	432.3
115°	474.6	486.1	493.3	501.2	499.0	502.6	505.5	497.6	490.4
117.5°	529.9	544.2	548.5	556.4	559.2	556.4	559.2	552.8	546.3
120°	587.9	599.4	602.3	609.4	613.0	608.7	612.3	606.6	599.4
122.5°	640.3	650.3	657.5	660.3	663.9	658.9	663.2	656.8	650.3
125°	689.7	700.5	711.2	710.5	714.1	708.4	713.4	705.5	699.8
127.5°	737.1	747.8	760.7	758.6	761.4	755.7	762.2	752.8	747.8
130°	782.9	795.9	807.3	804.5	807.3	802.3	808.0	799.4	794.4
132.5°	832.4	844.6	851.8	848.9	848.9	846.0	853.9	844.6	837.4
135°	879.7	887.6	894.8	890.5	890.5	887.6	896.2	887.6	879.0
137.5°	919.9	928.5	933.5	930.6	930.6	927.1	935.7	927.8	919.2
140°	958.6	966.5	970.8	967.2	967.2	964.3	972.9	966.5	957.2
142.5°	996.6	1003.8	1008.1	1002.3	1002.3	999.5	1010.2	1003.1	992.3
145°	1033.9	1038.9	1043.9	1035.3	1036.0	1031.7	1044.6	1037.5	1027.4
147.5°	1061.9	1071.2	1076.9	1066.9	1066.9	1063.3	1076.9	1069.7	1058.3
150°	1095.6	1099.1	1105.6	1097.0	1096.3	1093.4	1106.3	1098.4	1088.4
152.5°	1118.5	1127.1	1132.8	1123.5	1122.8	1119.2	1133.6	1124.9	1114.9
155°	1146.5	1150.0	1157.2	1148.6	1146.5	1145.0	1158.6	1147.9	1140.0
157.5°	1166.5	1170.8	1180.9	1173.0	1167.3	1169.4	1180.2	1168.0	1161.5
160°	1187.3	1188.8	1200.2	1192.3	1185.9	1188.8	1199.5	1184.5	1182.3
162.5°	1205.3	1206.0	1216.7	1207.4	1202.4	1203.1	1216.0	1201.0	1197.4
165°	1218.2	1216.7	1227.5	1219.6	1216.0	1216.0	1227.5	1213.9	1213.1
167.5°	1230.3	1229.6	1234.6	1229.6	1228.9	1225.3	1233.9	1224.6	1226.8
170°	1239.7	1236.8	1239.7	1232.5	1232.5	1228.9	1240.4	1232.5	1235.4
172.5°	1248.3	1242.5	1242.5	1232.5	1230.3	1229.6	1243.3	1239.0	1243.3
175°	1250.4	1245.4	1243.3	1232.5	1223.9	1230.3	1244.0	1241.1	1248.3
177.5°	1252.6	1244.7	1242.5	1229.6	1227.5	1228.2	1243.3	1241.8	1250.4
180°	1238.2	1238.2	1238.2	1238.2	1238.2	1238.2	1238.2	1238.2	1238.2

(END OF REPORT)