

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: P199450

Luminaire Tested: **S123-DIW-U2-2-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199450
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-U2-2-30-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-3000K, NO LENS
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

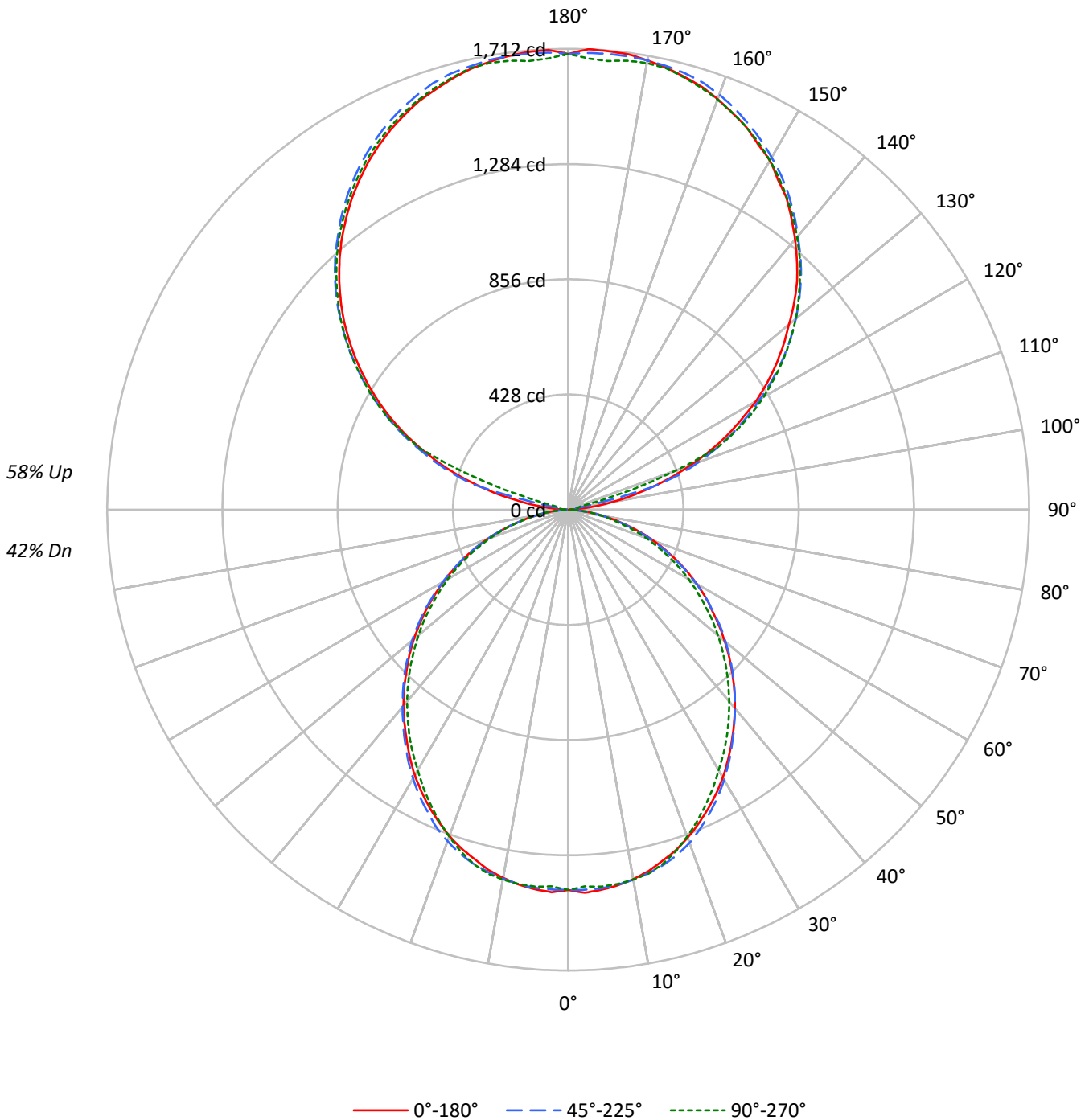
Lumens per Lamp: N/A
Luminaire Lumens: 8725.9 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 80.5
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				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	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	42	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25
4	73	62	55	49	66	57	50	45	48	42	38	39	35	32	30	28	26	22
5	67	55	47	42	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	23	20	17	15
8	53	41	33	28	48	37	31	26	32	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14894	14894	14894
5°	14883	13152	14862
10°	14687	11811	14635
15°	14391	10601	14318
20°	14081	9377	14007
25°	13691	8274	13604
30°	13283	7291	13170
35°	12792	6450	12637
40°	12302	5669	12164
45°	11781	4947	11608
50°	11218	4269	11058
55°	10595	3624	10419
60°	10023	3028	9719
65°	9255	2430	8888
70°	8301	1853	7868
75°	6960	1277	6453
80°	5206	764	4655
85°	2951	327	2603



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	1.5
10°-20°	382.3	4.4
20°-30°	565.0	6.5
30°-40°	657.6	7.5
40°-50°	659.9	7.6
50°-60°	577.6	6.6
60°-70°	426.6	4.9
70°-80°	233.0	2.7
80°-90°	60.2	0.7
90°-100°	39.5	0.5
100°-110°	278.7	3.2
110°-120°	667.0	7.6
120°-130°	863.4	9.9
130°-140°	937.1	10.7
140°-150°	887.1	10.2
150°-160°	724.6	8.3
160°-170°	470.8	5.4
170°-180°	161.5	1.9
0°-30°	1081.2	12.4
0°-40°	1738.9	19.9
0°-60°	2976.4	34.1
0°-90°	3696.3	42.4
90°-120°	985.2	11.3
90°-150°	3672.8	42.1
90°-180°	5030.0	57.6
0°-180°	8725.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1412	1412	1412	1412	1412	
5°	1417	1412	1406	1410	1415	135
15°	1351	1366	1362	1362	1344	381
25°	1227	1244	1209	1237	1219	565
35°	1058	1062	1027	1056	1045	662
45°	863	866	829	859	850	665
55°	652	655	620	649	641	585
65°	444	439	411	428	426	439
75°	229	224	207	212	213	244
85°	50	54	49	48	44	58
90°	3	6	4	5	2	5
95°	50	22	24	24	61	66
105°	320	315	48	369	347	340
115°	649	674	682	691	670	640
125°	943	972	976	975	957	842
135°	1203	1223	1217	1225	1202	925
145°	1414	1427	1416	1428	1405	882
155°	1567	1582	1567	1584	1559	722
165°	1665	1678	1662	1678	1658	471
175°	1710	1700	1673	1701	1707	163
180°	1693	1693	1693	1693	1693	



TEST NUMBER: P199450

CATALOG NUMBER: S123-DIW-U2-2-30-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5
2.5°	1424.3	1409.6	1413.5	1411.5	1400.7	1411.5	1412.5	1408.6	1422.3
5°	1417.4	1404.7	1412.5	1409.6	1405.6	1409.6	1410.5	1402.7	1415.4
7.5°	1407.6	1396.8	1405.6	1404.7	1402.7	1404.7	1403.7	1392.9	1404.7
10°	1393.9	1384.1	1395.8	1397.8	1394.9	1396.8	1391.9	1381.1	1389.0
12.5°	1375.3	1367.4	1382.1	1386.0	1384.1	1385.1	1378.2	1362.5	1370.4
15°	1350.8	1346.8	1366.4	1369.4	1361.5	1366.4	1361.5	1341.9	1343.9
17.5°	1327.2	1323.3	1344.9	1340.9	1330.2	1338.0	1339.0	1317.4	1319.4
20°	1296.8	1294.9	1317.4	1305.7	1291.9	1301.7	1310.6	1289.0	1290.0
22.5°	1263.5	1265.5	1282.1	1265.5	1251.7	1261.6	1278.2	1257.6	1255.7
25°	1227.2	1233.1	1243.9	1224.3	1208.6	1219.4	1237.0	1225.3	1219.4
27.5°	1190.0	1198.8	1202.7	1180.2	1164.5	1175.3	1197.8	1190.0	1180.2
30°	1148.8	1159.6	1158.6	1135.1	1117.5	1129.2	1152.7	1151.8	1139.0
32.5°	1103.7	1118.4	1110.6	1088.1	1073.3	1082.2	1105.7	1108.6	1093.9
35°	1057.7	1073.3	1061.6	1040.0	1027.3	1036.1	1055.7	1064.5	1044.9
37.5°	1010.6	1026.3	1012.6	992.0	979.2	988.1	1006.7	1017.5	998.9
40°	962.6	977.3	963.6	945.9	930.2	940.0	956.7	968.5	951.8
42.5°	913.6	929.3	914.6	896.9	880.2	893.0	907.7	919.5	901.8
45°	862.6	879.3	865.5	845.0	829.3	842.0	858.7	868.5	849.9
47.5°	810.6	830.3	814.6	793.0	777.3	790.1	807.7	817.5	799.9
50°	758.7	775.4	763.6	741.1	725.4	737.1	756.7	764.6	747.9
52.5°	705.8	725.4	711.6	689.1	674.4	684.2	702.8	711.6	694.0
55°	651.9	667.5	654.8	636.2	619.5	631.3	648.9	654.8	641.1
57.5°	604.8	616.6	604.8	584.2	568.5	577.4	594.0	601.9	588.1
60°	550.9	561.7	549.9	530.3	516.6	524.4	538.1	547.9	534.2
62.5°	497.0	507.8	494.0	476.4	463.6	472.5	484.2	493.1	480.3
65°	444.0	453.8	439.1	423.5	410.7	419.5	428.4	438.2	426.4
67.5°	390.1	399.0	385.2	369.5	358.8	365.6	373.5	383.3	373.5
70°	337.2	344.1	332.3	317.6	307.8	313.7	320.5	328.4	319.6
72.5°	284.3	293.1	278.4	266.6	257.8	259.8	267.6	273.5	266.6
75°	229.4	235.3	224.5	214.7	206.8	208.8	211.7	220.6	212.7
77.5°	178.4	185.3	176.4	167.6	161.7	163.7	164.7	170.6	162.7
80°	130.4	136.3	130.4	123.5	119.6	120.6	120.6	124.5	116.6
82.5°	87.2	93.1	89.2	84.3	83.3	81.4	81.4	84.3	76.5
85°	50.0	56.9	53.9	50.0	49.0	48.0	48.0	50.0	44.1
87.5°	22.5	27.4	24.5	21.6	19.6	18.6	18.6	21.6	16.7
90°	2.9	6.9	5.9	3.9	3.9	3.9	4.9	5.9	2.0
92.5°	10.8	12.7	12.7	12.7	12.7	14.7	15.7	15.7	18.6
95°	50.0	18.6	21.6	23.5	24.5	24.5	23.5	20.6	60.8
97.5°	103.9	82.3	26.5	29.4	31.4	30.4	28.4	104.9	117.6
100°	168.6	191.1	29.4	33.3	35.3	34.3	32.3	214.7	186.2
102.5°	240.2	266.6	105.9	37.2	38.2	37.2	161.7	289.2	265.6
105°	320.5	343.1	314.7	62.7	48.0	76.5	368.6	365.6	347.0
107.5°	401.9	424.4	429.3	278.4	251.9	292.1	450.9	445.0	431.3
110°	485.2	501.9	512.7	517.6	422.5	524.4	531.3	523.4	511.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	568.5	586.2	596.0	602.8	595.0	607.7	609.7	601.9	591.1
115°	648.9	664.6	674.4	685.2	682.2	687.1	691.1	680.3	670.5
117.5°	724.4	744.0	749.9	760.7	764.6	760.7	764.6	755.8	746.9
120°	803.8	819.5	823.4	833.2	838.1	832.2	837.1	829.3	819.5
122.5°	875.3	889.1	898.9	902.8	907.7	900.8	906.7	897.9	889.1
125°	943.0	957.7	972.4	971.4	976.3	968.5	975.3	964.5	956.7
127.5°	1007.7	1022.4	1040.0	1037.1	1041.0	1033.2	1042.0	1029.2	1022.4
130°	1070.4	1088.1	1103.7	1099.8	1103.7	1096.9	1104.7	1093.0	1086.1
132.5°	1138.0	1154.7	1164.5	1160.6	1160.6	1156.7	1167.4	1154.7	1144.9
135°	1202.7	1213.5	1223.3	1217.4	1217.4	1213.5	1225.3	1213.5	1201.8
137.5°	1257.6	1269.4	1276.3	1272.3	1272.3	1267.4	1279.2	1268.4	1256.7
140°	1310.6	1321.3	1327.2	1322.3	1322.3	1318.4	1330.2	1321.3	1308.6
142.5°	1362.5	1372.3	1378.2	1370.4	1370.4	1366.4	1381.1	1371.3	1356.6
145°	1413.5	1420.3	1427.2	1415.4	1416.4	1410.5	1428.2	1418.4	1404.7
147.5°	1451.7	1464.5	1472.3	1458.6	1458.6	1453.7	1472.3	1462.5	1446.8
150°	1497.8	1502.7	1511.5	1499.7	1498.8	1494.8	1512.5	1501.7	1488.0
152.5°	1529.2	1540.9	1548.8	1536.0	1535.0	1530.1	1549.7	1538.0	1524.3
155°	1567.4	1572.3	1582.1	1570.3	1567.4	1565.4	1584.0	1569.3	1558.6
157.5°	1594.8	1600.7	1614.4	1603.7	1595.8	1598.7	1613.5	1596.8	1588.0
160°	1623.3	1625.2	1640.9	1630.1	1621.3	1625.2	1639.9	1619.3	1616.4
162.5°	1647.8	1648.7	1663.4	1650.7	1643.8	1644.8	1662.5	1641.9	1637.0
165°	1665.4	1663.4	1678.1	1667.4	1662.5	1662.5	1678.1	1659.5	1658.5
167.5°	1682.1	1681.1	1687.9	1681.1	1680.1	1675.2	1687.0	1674.2	1677.2
170°	1694.8	1690.9	1694.8	1685.0	1685.0	1680.1	1695.8	1685.0	1688.9
172.5°	1706.6	1698.7	1698.7	1685.0	1682.1	1681.1	1699.7	1693.8	1699.7
175°	1709.5	1702.7	1699.7	1685.0	1673.2	1682.1	1700.7	1696.8	1706.6
177.5°	1712.5	1701.7	1698.7	1681.1	1678.1	1679.1	1699.7	1697.8	1709.5
180°	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9

(END OF REPORT)