

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: P199452

Luminaire Tested: **S123-DIP-U2-2-40-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199452
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-DIP-U2-2-40-X-X0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL2-4000K, NO LENS
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9189.3 lumens
Efficiency: N/A
Efficacy: 114.2 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

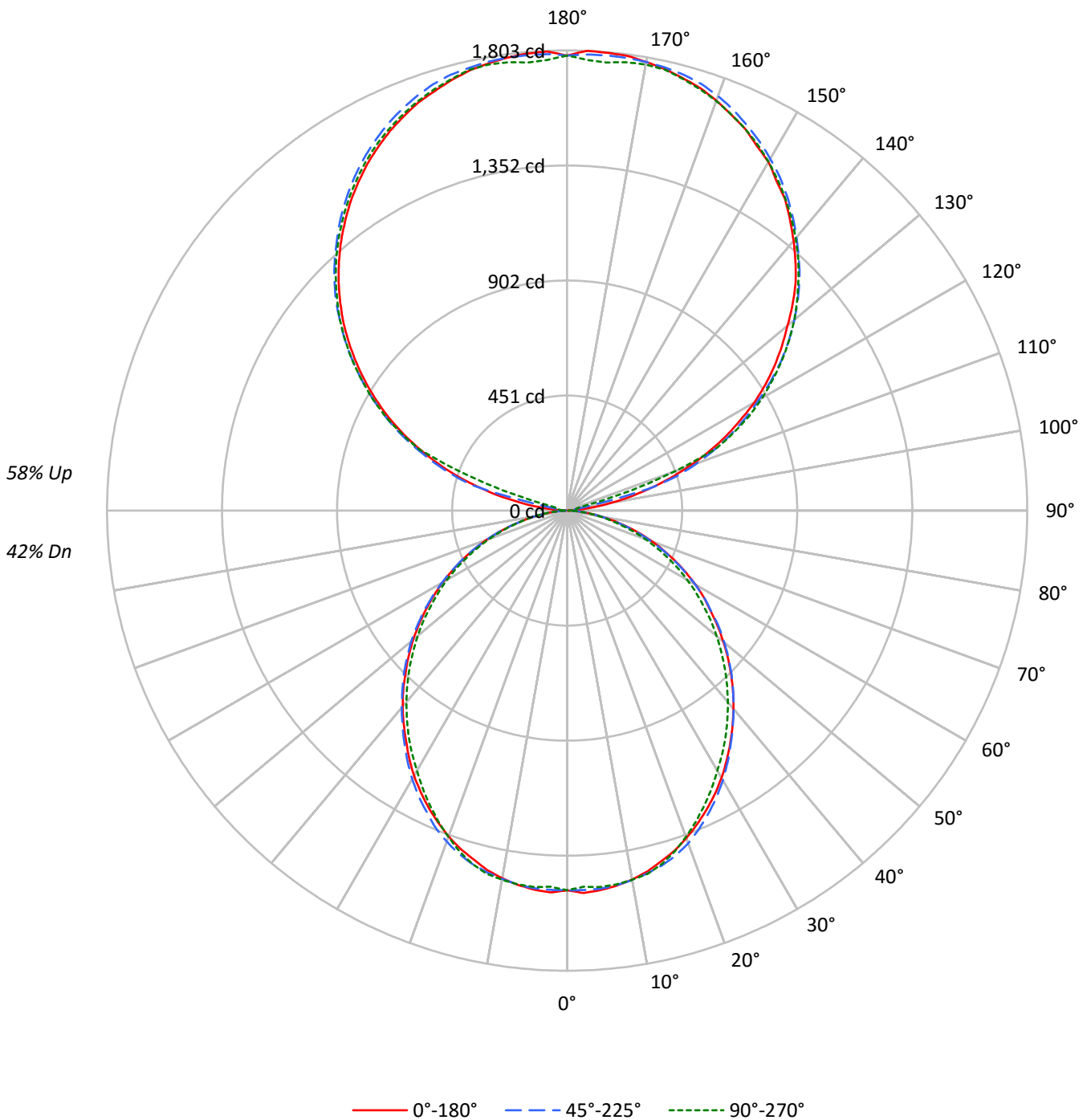
Input Watts (W): 80.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	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	1.5
10°-20°	402.6	4.4
20°-30°	595.0	6.5
30°-40°	692.5	7.5
40°-50°	695.0	7.6
50°-60°	608.3	6.6
60°-70°	449.3	4.9
70°-80°	245.4	2.7
80°-90°	63.4	0.7
90°-100°	41.6	0.5
100°-110°	293.5	3.2
110°-120°	702.4	7.6
120°-130°	909.3	9.9
130°-140°	986.9	10.7
140°-150°	934.2	10.2
150°-160°	763.1	8.3
160°-170°	495.8	5.4
170°-180°	170.1	1.9
0°-30°	1138.7	12.4
0°-40°	1831.2	19.9
0°-60°	3134.4	34.1
0°-90°	3892.5	42.4
90°-120°	1037.5	11.3
90°-150°	3867.8	42.1
90°-180°	5297.0	57.6
0°-180°	9189.3	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	6
95°	53	23	26	25	64	70
105°	338	331	51	388	365	358
115°	683	710	718	728	706	674
125°	993	1024	1028	1027	1008	886
135°	1267	1288	1282	1290	1266	974
145°	1488	1503	1492	1504	1479	929
155°	1651	1666	1651	1668	1641	760
165°	1754	1767	1751	1767	1747	496
175°	1800	1790	1762	1791	1797	171
180°	1783	1783	1783	1783	1783	



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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°	11.4	13.4	13.4	13.4	13.4	15.5	16.5	16.5	19.6
95°	52.6	19.6	22.7	24.8	25.8	25.8	24.8	21.7	64.0
97.5°	109.4	86.7	27.9	31.0	33.0	32.0	29.9	110.5	123.9
100°	177.6	201.3	31.0	35.1	37.2	36.1	34.1	226.1	196.1
102.5°	252.9	280.8	111.5	39.2	40.3	39.2	170.3	304.5	279.7
105°	337.6	361.3	331.4	66.1	50.6	80.5	388.1	385.0	365.4
107.5°	423.2	447.0	452.1	293.2	265.3	307.6	474.8	468.7	454.2
110°	511.0	528.5	539.9	545.0	444.9	552.3	559.5	551.2	538.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	598.7	617.3	627.6	634.9	626.6	640.0	642.1	633.8	622.5
115°	683.4	699.9	710.2	721.6	718.5	723.6	727.8	716.4	706.1
117.5°	762.9	783.5	789.7	801.0	805.2	801.0	805.2	795.9	786.6
120°	846.5	863.0	867.1	877.4	882.6	876.4	881.6	873.3	863.0
122.5°	921.8	936.3	946.6	950.7	955.9	948.7	954.9	945.6	936.3
125°	993.1	1008.5	1024.0	1023.0	1028.1	1019.9	1027.1	1015.8	1007.5
127.5°	1061.2	1076.7	1095.2	1092.2	1096.3	1088.0	1097.3	1083.9	1076.7
130°	1127.2	1145.8	1162.3	1158.2	1162.3	1155.1	1163.4	1151.0	1143.8
132.5°	1198.5	1216.0	1226.3	1222.2	1222.2	1218.1	1229.4	1216.0	1205.7
135°	1266.6	1278.0	1288.3	1282.1	1282.1	1278.0	1290.3	1278.0	1265.6
137.5°	1324.4	1336.8	1344.0	1339.9	1339.9	1334.7	1347.1	1335.8	1323.4
140°	1380.2	1391.5	1397.7	1392.5	1392.5	1388.4	1400.8	1391.5	1378.1
142.5°	1434.9	1445.2	1451.4	1443.1	1443.1	1439.0	1454.5	1444.2	1428.7
145°	1488.5	1495.8	1503.0	1490.6	1491.6	1485.4	1504.0	1493.7	1479.3
147.5°	1528.8	1542.2	1550.5	1536.0	1536.0	1530.9	1550.5	1540.2	1523.6
150°	1577.3	1582.5	1591.8	1579.4	1578.4	1574.2	1592.8	1581.5	1567.0
152.5°	1610.4	1622.7	1631.0	1617.6	1616.5	1611.4	1632.0	1619.6	1605.2
155°	1650.6	1655.8	1666.1	1653.7	1650.6	1648.5	1668.2	1652.7	1641.3
157.5°	1679.5	1685.7	1700.2	1688.8	1680.6	1683.6	1699.1	1681.6	1672.3
160°	1709.5	1711.5	1728.0	1716.7	1707.4	1711.5	1727.0	1705.3	1702.2
162.5°	1735.3	1736.3	1751.8	1738.4	1731.1	1732.2	1750.7	1729.1	1723.9
165°	1753.8	1751.8	1767.3	1755.9	1750.7	1750.7	1767.3	1747.6	1746.6
167.5°	1771.4	1770.4	1777.6	1770.4	1769.3	1764.2	1776.6	1763.1	1766.2
170°	1784.8	1780.7	1784.8	1774.5	1774.5	1769.3	1785.8	1774.5	1778.6
172.5°	1797.2	1788.9	1788.9	1774.5	1771.4	1770.4	1790.0	1783.8	1790.0
175°	1800.3	1793.1	1790.0	1774.5	1762.1	1771.4	1791.0	1786.9	1797.2
177.5°	1803.4	1792.0	1788.9	1770.4	1767.3	1768.3	1790.0	1787.9	1800.3
180°	1782.7	1782.7	1782.7	1782.7	1782.7	1782.7	1782.7	1782.7	1782.7

(END OF REPORT)