

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: P199453

Luminaire Tested: **S123-DIP-U2-LO-30-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199453
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-LO-30-X-X0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL2-3000K, NO LENS
DOWNLIGHT LLO-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6348.4 lumens
Efficiency: N/A
Efficacy: 121.4 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: Semi-Indirect

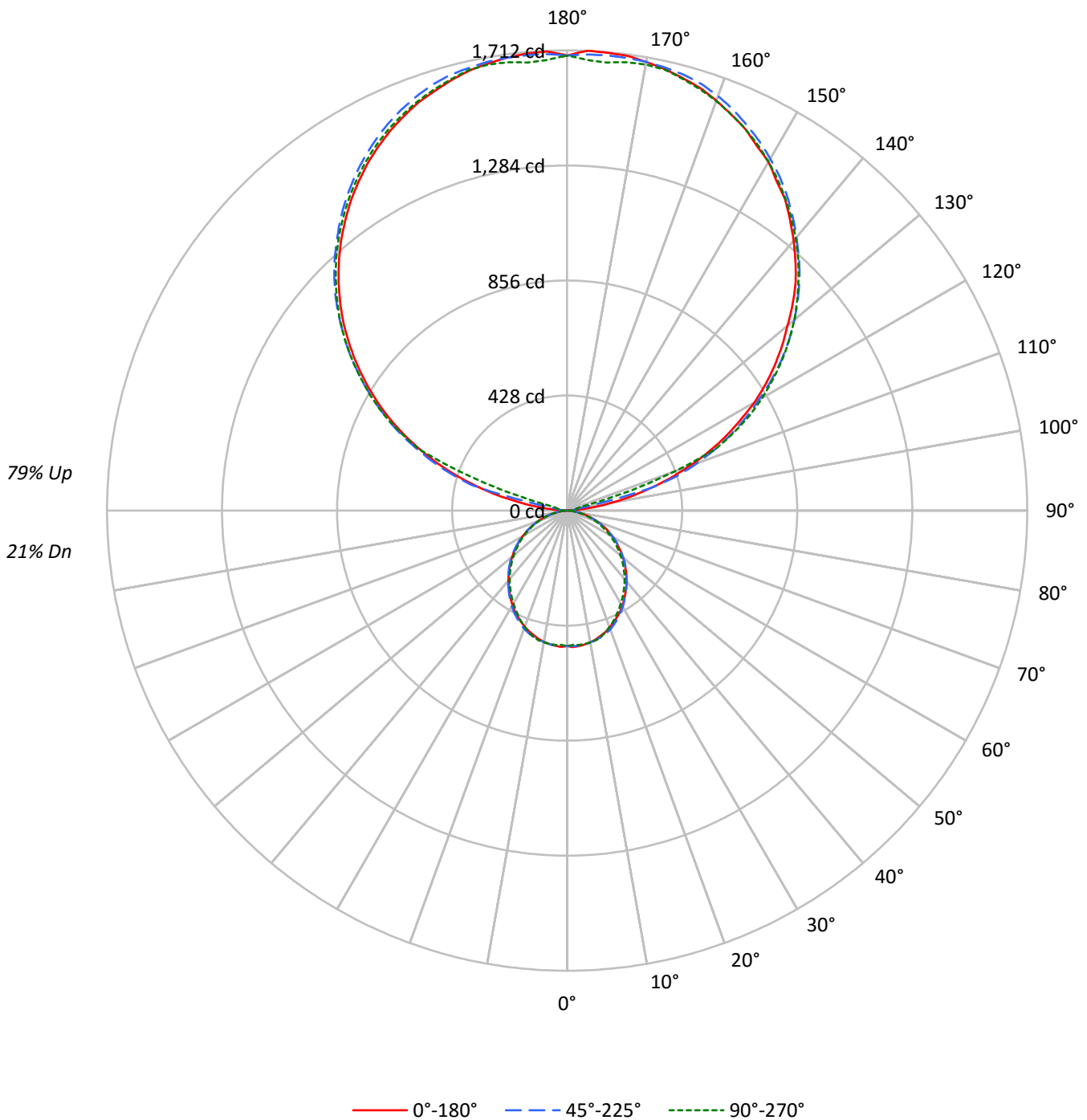
Input Watts (W): 52.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	100	100	100	100	89	89	89	89	67	67	67	47	47	47	29	29	29	21
1	91	87	83	80	81	77	74	71	59	57	55	42	40	39	26	25	25	18
2	83	76	70	65	73	67	63	58	51	48	45	36	35	33	23	22	21	15
3	76	67	60	54	67	59	53	49	45	41	38	32	30	28	20	19	18	12
4	69	59	51	46	61	52	46	41	40	36	32	29	26	24	18	16	15	11
5	63	52	45	39	56	47	40	35	36	31	28	26	23	20	16	14	13	9
6	58	47	39	33	51	42	35	30	32	27	24	23	20	18	15	13	12	8
7	54	42	34	29	47	37	31	26	29	24	21	21	18	16	13	12	10	7
8	50	38	31	25	44	34	28	23	26	22	18	19	16	14	12	10	9	6
9	46	34	27	22	41	31	25	20	24	19	16	17	14	12	11	9	8	6
10	43	31	25	20	38	28	22	18	22	18	15	16	13	11	10	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5315	5315	5315
5°	5312	4694	5305
10°	5242	4215	5223
15°	5136	3784	5110
20°	5025	3347	4999
25°	4887	2953	4855
30°	4741	2602	4700
35°	4566	2302	4510
40°	4390	2023	4341
45°	4205	1766	4142
50°	4004	1524	3946
55°	3780	1294	3718
60°	3577	1081	3470
65°	3304	867	3173
70°	2962	662	2806
75°	2485	456	2303
80°	1857	273	1661
85°	1051	117	927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.8	0.8
10°-20°	136.4	2.1
20°-30°	201.6	3.2
30°-40°	234.7	3.7
40°-50°	235.5	3.7
50°-60°	206.1	3.2
60°-70°	152.3	2.4
70°-80°	83.2	1.3
80°-90°	21.5	0.3
90°-100°	39.0	0.6
100°-110°	278.7	4.4
110°-120°	667.0	10.5
120°-130°	863.4	13.6
130°-140°	937.1	14.8
140°-150°	887.1	14.0
150°-160°	724.6	11.4
160°-170°	470.8	7.4
170°-180°	161.5	2.5
0°-30°	385.9	6.1
0°-40°	620.6	9.8
0°-60°	1062.3	16.7
0°-90°	1319.2	20.8
90°-120°	984.7	15.5
90°-150°	3672.4	57.8
90°-180°	5029.0	79.2
0°-180°	6348.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	504	504	504	504	504	
5°	506	504	502	503	505	48
15°	482	488	486	486	480	136
25°	438	444	431	442	435	202
35°	378	379	367	377	373	236
45°	308	309	296	306	303	237
55°	233	234	221	232	229	209
65°	158	157	147	153	152	157
75°	82	80	74	76	76	87
85°	18	19	18	17	16	21
90°	1	2	1	2	1	3
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: P199453

CATALOG NUMBER: S123-DIP-U2-LO-30-X-X0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	504.1	504.1	504.1	504.1	504.1	504.1	504.1	504.1	504.1
2.5°	508.3	503.1	504.5	503.8	499.9	503.8	504.1	502.7	507.6
5°	505.9	501.3	504.1	503.1	501.7	503.1	503.4	500.6	505.2
7.5°	502.4	498.5	501.7	501.3	500.6	501.3	501.0	497.1	501.3
10°	497.5	494.0	498.2	498.9	497.8	498.5	496.8	492.9	495.7
12.5°	490.8	488.0	493.3	494.7	494.0	494.3	491.9	486.3	489.1
15°	482.1	480.7	487.7	488.7	485.9	487.7	485.9	478.9	479.6
17.5°	473.7	472.3	480.0	478.6	474.7	477.5	477.9	470.2	470.9
20°	462.8	462.1	470.2	466.0	461.1	464.6	467.7	460.0	460.4
22.5°	450.9	451.6	457.6	451.6	446.7	450.2	456.2	448.8	448.1
25°	438.0	440.1	444.0	437.0	431.4	435.2	441.5	437.3	435.2
27.5°	424.7	427.9	429.3	421.2	415.6	419.5	427.5	424.7	421.2
30°	410.0	413.9	413.5	405.1	398.8	403.0	411.4	411.1	406.5
32.5°	393.9	399.2	396.4	388.3	383.1	386.2	394.6	395.7	390.4
35°	377.5	383.1	378.9	371.2	366.6	369.8	376.8	379.9	372.9
37.5°	360.7	366.3	361.4	354.0	349.5	352.6	359.3	363.1	356.5
40°	343.5	348.8	343.9	337.6	332.0	335.5	341.4	345.6	339.7
42.5°	326.1	331.7	326.4	320.1	314.2	318.7	324.0	328.2	321.9
45°	307.9	313.8	308.9	301.6	296.0	300.5	306.5	310.0	303.3
47.5°	289.3	296.3	290.7	283.0	277.4	282.0	288.3	291.8	285.5
50°	270.8	276.7	272.5	264.5	258.9	263.1	270.1	272.9	266.9
52.5°	251.9	258.9	254.0	245.9	240.7	244.2	250.8	254.0	247.7
55°	232.6	238.2	233.7	227.0	221.1	225.3	231.6	233.7	228.8
57.5°	215.9	220.1	215.9	208.5	202.9	206.1	212.0	214.8	209.9
60°	196.6	200.5	196.3	189.3	184.4	187.2	192.1	195.6	190.7
62.5°	177.4	181.2	176.3	170.0	165.5	168.6	172.8	176.0	171.4
65°	158.5	162.0	156.7	151.1	146.6	149.7	152.9	156.4	152.2
67.5°	139.2	142.4	137.5	131.9	128.0	130.5	133.3	136.8	133.3
70°	120.3	122.8	118.6	113.3	109.9	111.9	114.4	117.2	114.0
72.5°	101.5	104.6	99.4	95.2	92.0	92.7	95.5	97.6	95.2
75°	81.9	84.0	80.1	76.6	73.8	74.5	75.6	78.7	75.9
77.5°	63.7	66.1	63.0	59.8	57.7	58.4	58.8	60.9	58.1
80°	46.5	48.6	46.5	44.1	42.7	43.0	43.0	44.4	41.6
82.5°	31.1	33.2	31.8	30.1	29.7	29.0	29.0	30.1	27.3
85°	17.8	20.3	19.2	17.8	17.5	17.1	17.1	17.8	15.7
87.5°	8.0	9.8	8.7	7.7	7.0	6.6	6.6	7.7	5.9
90°	1.0	2.4	2.1	1.4	1.4	1.4	1.7	2.1	0.7
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)