

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: P199455

Luminaire Tested: **S123-DIW-U2-LO-40-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199455
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-LO-40-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-4000K, NO LENS
DOWNLIGHT LLO-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

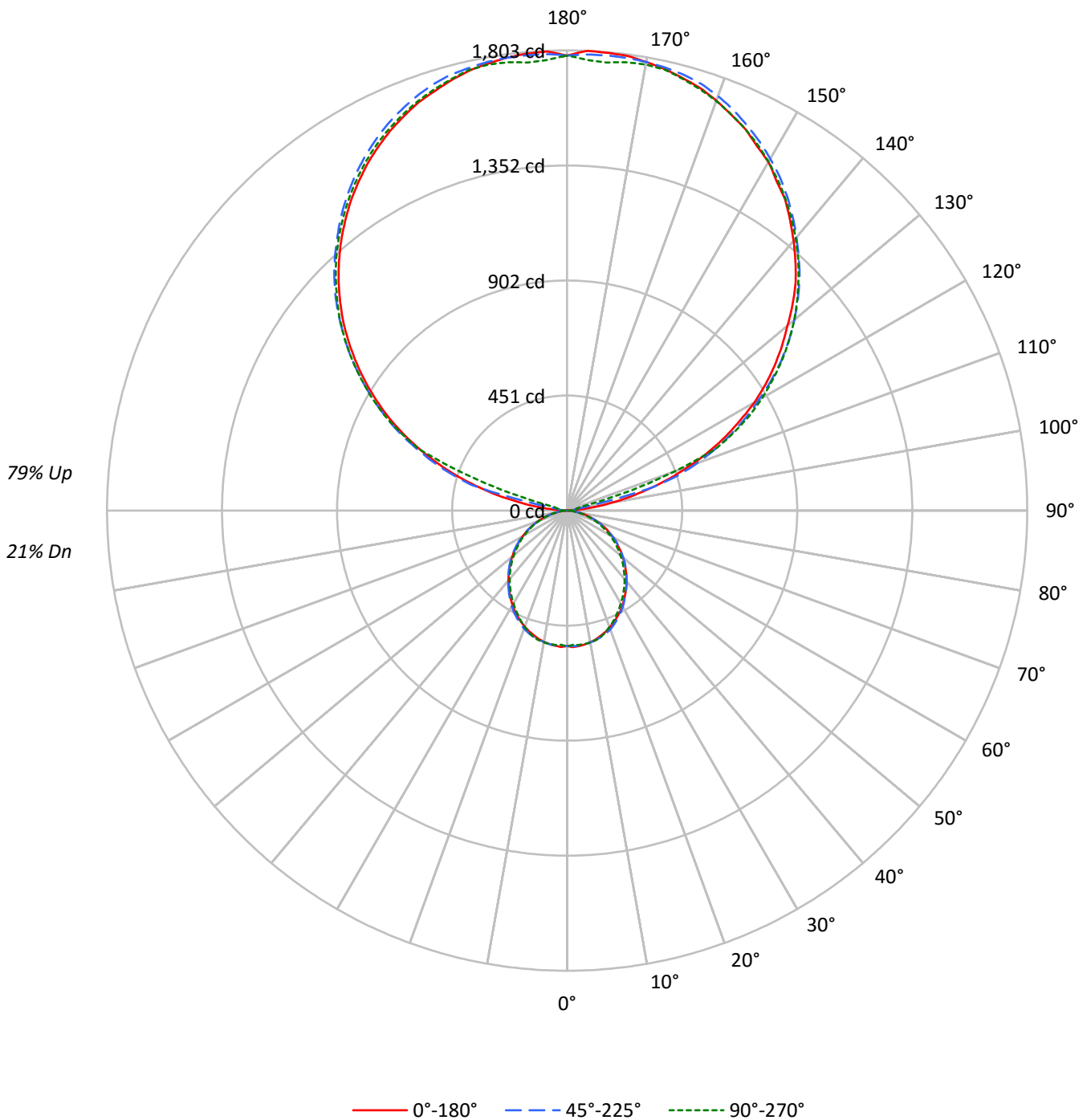
Lumens per Lamp: N/A
Luminaire Lumens: 6685.6 lumens
Efficiency: N/A
Efficacy: 127.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: Semi-Indirect

Input Watts (W): 52.3
Input Voltage (V): NR
Input Current (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	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°	5598	5598	5598
5°	5593	4943	5586
10°	5520	4439	5501
15°	5409	3984	5381
20°	5292	3525	5264
25°	5147	3110	5113
30°	4993	2740	4950
35°	4808	2424	4749
40°	4624	2131	4571
45°	4428	1859	4362
50°	4217	1604	4156
55°	3982	1362	3915
60°	3768	1138	3653
65°	3479	914	3341
70°	3119	697	2957
75°	2615	480	2424
80°	1956	287	1749
85°	1110	123	980



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.3	0.8
10°-20°	143.7	2.1
20°-30°	212.4	3.2
30°-40°	247.2	3.7
40°-50°	248.0	3.7
50°-60°	217.1	3.2
60°-70°	160.4	2.4
70°-80°	87.6	1.3
80°-90°	22.6	0.3
90°-100°	41.1	0.6
100°-110°	293.5	4.4
110°-120°	702.4	10.5
120°-130°	909.3	13.6
130°-140°	986.9	14.8
140°-150°	934.2	14.0
150°-160°	763.1	11.4
160°-170°	495.8	7.4
170°-180°	170.1	2.5
0°-30°	406.4	6.1
0°-40°	653.6	9.8
0°-60°	1118.7	16.7
0°-90°	1389.3	20.8
90°-120°	1037.0	15.5
90°-150°	3867.4	57.8
90°-180°	5296.0	79.2
0°-180°	6685.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	531	531	531	531	531	
5°	533	531	528	530	532	51
15°	508	514	512	512	505	143
25°	461	468	454	465	458	213
35°	398	399	386	397	393	249
45°	324	325	312	323	319	250
55°	245	246	233	244	241	220
65°	167	165	154	161	160	165
75°	86	84	78	80	80	92
85°	19	20	18	18	17	22
90°	1	2	2	2	1	3
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	



TEST NUMBER: P199455

CATALOG NUMBER: S123-DIW-U2-LO-40-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	530.9	530.9	530.9	530.9	530.9	530.9	530.9	530.9	530.9
2.5°	535.3	529.8	531.3	530.5	526.5	530.5	530.9	529.4	534.6
5°	532.7	527.9	530.9	529.8	528.3	529.8	530.2	527.2	532.0
7.5°	529.1	525.0	528.3	527.9	527.2	527.9	527.6	523.5	527.9
10°	523.9	520.2	524.6	525.4	524.3	525.0	523.2	519.1	522.1
12.5°	516.9	513.9	519.5	520.9	520.2	520.6	518.0	512.1	515.1
15°	507.7	506.2	513.6	514.7	511.7	513.6	511.7	504.4	505.1
17.5°	498.8	497.4	505.5	504.0	499.9	502.9	503.3	495.2	495.9
20°	487.4	486.7	495.2	490.7	485.6	489.3	492.6	484.5	484.8
22.5°	474.9	475.6	481.9	475.6	470.5	474.2	480.4	472.7	471.9
25°	461.3	463.5	467.5	460.2	454.3	458.3	464.9	460.5	458.3
27.5°	447.3	450.6	452.1	443.6	437.7	441.7	450.2	447.3	443.6
30°	431.8	435.8	435.5	426.6	420.0	424.4	433.3	432.9	428.1
32.5°	414.8	420.4	417.4	408.9	403.4	406.7	415.6	416.7	411.2
35°	397.5	403.4	399.0	390.9	386.1	389.4	396.8	400.1	392.7
37.5°	379.8	385.7	380.6	372.8	368.1	371.4	378.4	382.4	375.4
40°	361.8	367.3	362.2	355.5	349.6	353.3	359.6	364.0	357.7
42.5°	343.4	349.3	343.7	337.1	330.8	335.6	341.2	345.6	338.9
45°	324.2	330.5	325.3	317.6	311.7	316.5	322.7	326.4	319.4
47.5°	304.7	312.1	306.2	298.1	292.2	296.9	303.6	307.3	300.6
50°	285.2	291.4	287.0	278.5	272.6	277.1	284.4	287.4	281.1
52.5°	265.3	272.6	267.5	259.0	253.5	257.2	264.2	267.5	260.8
55°	245.0	250.9	246.1	239.1	232.8	237.3	243.9	246.1	240.9
57.5°	227.3	231.7	227.3	219.6	213.7	217.0	223.3	226.2	221.1
60°	207.1	211.1	206.7	199.3	194.2	197.1	202.3	205.9	200.8
62.5°	186.8	190.8	185.7	179.1	174.3	177.6	182.0	185.3	180.5
65°	166.9	170.6	165.1	159.2	154.4	157.7	161.0	164.7	160.3
67.5°	146.6	149.9	144.8	138.9	134.8	137.4	140.4	144.1	140.4
70°	126.7	129.3	124.9	119.4	115.7	117.9	120.5	123.4	120.1
72.5°	106.8	110.2	104.6	100.2	96.9	97.6	100.6	102.8	100.2
75°	86.2	88.4	84.4	80.7	77.7	78.5	79.6	82.9	79.9
77.5°	67.1	69.6	66.3	63.0	60.8	61.5	61.9	64.1	61.2
80°	49.0	51.2	49.0	46.4	44.9	45.3	45.3	46.8	43.8
82.5°	32.8	35.0	33.5	31.7	31.3	30.6	30.6	31.7	28.7
85°	18.8	21.4	20.3	18.8	18.4	18.1	18.1	18.8	16.6
87.5°	8.5	10.3	9.2	8.1	7.4	7.0	7.0	8.1	6.3
90°	1.1	2.6	2.2	1.5	1.5	1.5	1.8	2.2	0.7
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)