

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: P199454

Luminaire Tested: **S123-DIW-U2-LO-35-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199454
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-35-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-3500K, NO LENS
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

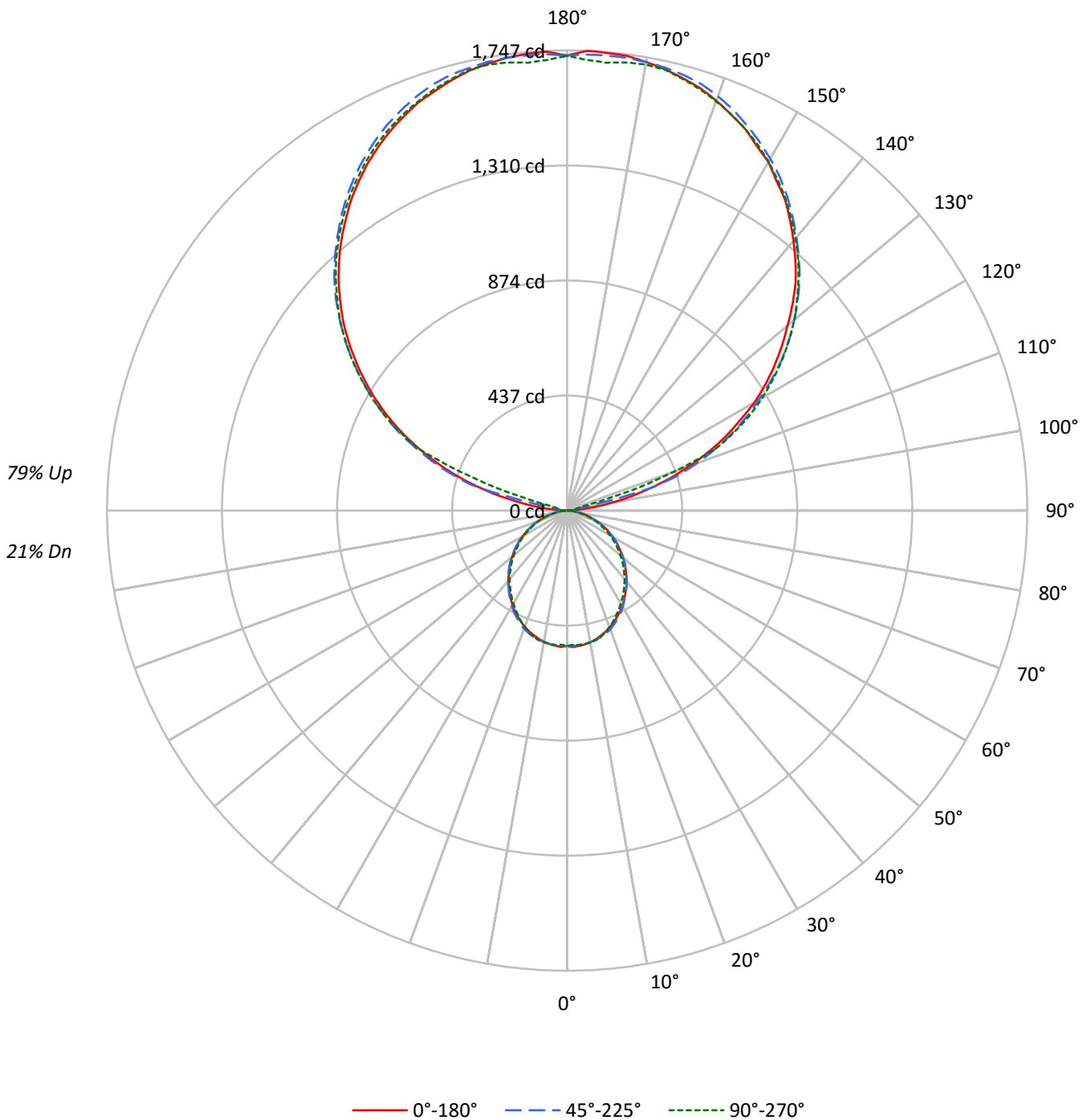
Lumens per Lamp: N/A
Luminaire Lumens: 6476.5 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: Semi-Indirect

Input Watts (W): 52.3
Input Voltage (V): NR
Input Current (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	34	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°	5423	5423	5423
5°	5419	4789	5412
10°	5347	4301	5328
15°	5240	3860	5213
20°	5127	3414	5100
25°	4985	3013	4953
30°	4837	2655	4795
35°	4658	2348	4602
40°	4479	2064	4428
45°	4290	1801	4226
50°	4084	1554	4026
55°	3857	1320	3793
60°	3650	1102	3539
65°	3371	885	3237
70°	3023	675	2863
75°	2533	465	2348
80°	1897	278	1697
85°	1074	119	950



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.8
10°-20°	139.2	2.1
20°-30°	205.7	3.2
30°-40°	239.4	3.7
40°-50°	240.3	3.7
50°-60°	210.3	3.2
60°-70°	155.3	2.4
70°-80°	84.8	1.3
80°-90°	21.9	0.3
90°-100°	39.8	0.6
100°-110°	284.3	4.4
110°-120°	680.5	10.5
120°-130°	880.8	13.6
130°-140°	956.0	14.8
140°-150°	905.0	14.0
150°-160°	739.2	11.4
160°-170°	480.3	7.4
170°-180°	164.8	2.5
0°-30°	393.7	6.1
0°-40°	633.1	9.8
0°-60°	1083.7	16.7
0°-90°	1345.8	20.8
90°-120°	1004.6	15.5
90°-150°	3746.5	57.8
90°-180°	5131.0	79.2
0°-180°	6476.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	514	514	514	514	514	
5°	516	514	512	514	515	49
15°	492	498	496	496	489	139
25°	447	453	440	450	444	206
35°	385	386	374	384	380	241
45°	314	315	302	313	309	242
55°	237	238	226	236	233	213
65°	162	160	150	156	155	160
75°	84	82	75	77	77	89
85°	18	20	18	18	16	21
90°	1	2	1	2	1	3
95°	51	22	25	24	62	68
105°	327	321	49	376	354	347
115°	662	688	696	705	684	653
125°	962	992	996	995	976	859
135°	1227	1248	1242	1250	1226	943
145°	1442	1456	1445	1457	1433	900
155°	1599	1614	1599	1616	1590	736
165°	1699	1712	1696	1712	1692	480
175°	1744	1734	1707	1735	1741	166
180°	1727	1727	1727	1727	1727	



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CATALOG NUMBER: S123-DIW-U2-LO-35-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3
2.5°	518.6	513.2	514.6	513.9	510.0	513.9	514.3	512.9	517.9
5°	516.1	511.4	514.3	513.2	511.8	513.2	513.6	510.7	515.4
7.5°	512.5	508.6	511.8	511.4	510.7	511.4	511.1	507.2	511.4
10°	507.5	503.9	508.2	508.9	507.9	508.6	506.8	502.9	505.7
12.5°	500.7	497.9	503.2	504.7	503.9	504.3	501.8	496.1	498.9
15°	491.8	490.4	497.5	498.6	495.7	497.5	495.7	488.6	489.3
17.5°	483.2	481.8	489.7	488.2	484.3	487.2	487.5	479.7	480.4
20°	472.2	471.5	479.7	475.4	470.4	474.0	477.2	469.3	469.7
22.5°	460.0	460.8	466.8	460.8	455.8	459.3	465.4	457.9	457.2
25°	446.8	449.0	452.9	445.8	440.1	444.0	450.4	446.1	444.0
27.5°	433.3	436.5	437.9	429.7	424.0	427.9	436.1	433.3	429.7
30°	418.3	422.2	421.9	413.3	406.9	411.1	419.7	419.4	414.7
32.5°	401.9	407.2	404.4	396.2	390.8	394.0	402.6	403.7	398.3
35°	385.1	390.8	386.5	378.7	374.0	377.2	384.4	387.6	380.5
37.5°	368.0	373.7	368.7	361.2	356.5	359.8	366.5	370.5	363.7
40°	350.5	355.8	350.8	344.4	338.7	342.3	348.3	352.6	346.5
42.5°	332.6	338.3	333.0	326.6	320.5	325.1	330.5	334.8	328.3
45°	314.1	320.1	315.1	307.6	301.9	306.6	312.6	316.2	309.4
47.5°	295.2	302.3	296.6	288.7	283.0	287.7	294.1	297.7	291.2
50°	276.2	282.3	278.0	269.8	264.1	268.4	275.5	278.4	272.3
52.5°	257.0	264.1	259.1	250.9	245.5	249.1	255.9	259.1	252.7
55°	237.3	243.0	238.4	231.6	225.6	229.8	236.3	238.4	233.4
57.5°	220.2	224.5	220.2	212.7	207.0	210.2	216.3	219.1	214.1
60°	200.6	204.5	200.2	193.1	188.1	190.9	195.9	199.5	194.5
62.5°	180.9	184.9	179.9	173.5	168.8	172.0	176.3	179.5	174.9
65°	161.7	165.2	159.9	154.2	149.5	152.8	156.0	159.5	155.3
67.5°	142.0	145.3	140.3	134.6	130.6	133.1	136.0	139.5	136.0
70°	122.8	125.3	121.0	115.6	112.1	114.2	116.7	119.6	116.3
72.5°	103.5	106.7	101.4	97.1	93.9	94.6	97.4	99.6	97.1
75°	83.5	85.7	81.7	78.2	75.3	76.0	77.1	80.3	77.4
77.5°	65.0	67.5	64.2	61.0	58.9	59.6	60.0	62.1	59.2
80°	47.5	49.6	47.5	45.0	43.5	43.9	43.9	45.3	42.5
82.5°	31.8	33.9	32.5	30.7	30.3	29.6	29.6	30.7	27.8
85°	18.2	20.7	19.6	18.2	17.8	17.5	17.5	18.2	16.1
87.5°	8.2	10.0	8.9	7.9	7.1	6.8	6.8	7.9	6.1
90°	1.1	2.5	2.1	1.4	1.4	1.4	1.8	2.1	0.7
92.5°	11.0	13.0	13.0	13.0	13.0	15.0	16.0	16.0	19.0
95°	51.0	19.0	22.0	24.0	25.0	25.0	24.0	21.0	62.0
97.5°	106.0	84.0	27.0	30.0	32.0	31.0	29.0	107.0	120.0
100°	172.0	195.0	30.0	34.0	36.0	35.0	33.0	219.0	190.0
102.5°	245.0	272.0	108.0	38.0	39.0	38.0	165.0	295.0	271.0
105°	327.0	350.0	321.0	64.0	49.0	78.0	376.0	373.0	354.0
107.5°	410.0	433.0	438.0	284.0	257.0	298.0	460.0	454.0	440.0
110°	495.0	512.0	523.0	528.0	431.0	535.0	542.0	534.0	522.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	580.0	598.0	608.0	615.0	607.0	620.0	622.0	614.0	603.0
115°	662.0	678.0	688.0	699.0	696.0	701.0	705.0	694.0	684.0
117.5°	739.0	759.0	765.0	776.0	780.0	776.0	780.0	771.0	762.0
120°	820.0	836.0	840.0	850.0	855.0	849.0	854.0	846.0	836.0
122.5°	893.0	907.0	917.0	921.0	926.0	919.0	925.0	916.0	907.0
125°	962.0	977.0	992.0	991.0	996.0	988.0	995.0	984.0	976.0
127.5°	1028.0	1043.0	1061.0	1058.0	1062.0	1054.0	1063.0	1050.0	1043.0
130°	1092.0	1110.0	1126.0	1122.0	1126.0	1119.0	1127.0	1115.0	1108.0
132.5°	1161.0	1178.0	1188.0	1184.0	1184.0	1180.0	1191.0	1178.0	1168.0
135°	1227.0	1238.0	1248.0	1242.0	1242.0	1238.0	1250.0	1238.0	1226.0
137.5°	1283.0	1295.0	1302.0	1298.0	1298.0	1293.0	1305.0	1294.0	1282.0
140°	1337.0	1348.0	1354.0	1349.0	1349.0	1345.0	1357.0	1348.0	1335.0
142.5°	1390.0	1400.0	1406.0	1398.0	1398.0	1394.0	1409.0	1399.0	1384.0
145°	1442.0	1449.0	1456.0	1444.0	1445.0	1439.0	1457.0	1447.0	1433.0
147.5°	1481.0	1494.0	1502.0	1488.0	1488.0	1483.0	1502.0	1492.0	1476.0
150°	1528.0	1533.0	1542.0	1530.0	1529.0	1525.0	1543.0	1532.0	1518.0
152.5°	1560.0	1572.0	1580.0	1567.0	1566.0	1561.0	1581.0	1569.0	1555.0
155°	1599.0	1604.0	1614.0	1602.0	1599.0	1597.0	1616.0	1601.0	1590.0
157.5°	1627.0	1633.0	1647.0	1636.0	1628.0	1631.0	1646.0	1629.0	1620.0
160°	1656.0	1658.0	1674.0	1663.0	1654.0	1658.0	1673.0	1652.0	1649.0
162.5°	1681.0	1682.0	1697.0	1684.0	1677.0	1678.0	1696.0	1675.0	1670.0
165°	1699.0	1697.0	1712.0	1701.0	1696.0	1696.0	1712.0	1693.0	1692.0
167.5°	1716.0	1715.0	1722.0	1715.0	1714.0	1709.0	1721.0	1708.0	1711.0
170°	1729.0	1725.0	1729.0	1719.0	1719.0	1714.0	1730.0	1719.0	1723.0
172.5°	1741.0	1733.0	1733.0	1719.0	1716.0	1715.0	1734.0	1728.0	1734.0
175°	1744.0	1737.0	1734.0	1719.0	1707.0	1716.0	1735.0	1731.0	1741.0
177.5°	1747.0	1736.0	1733.0	1715.0	1712.0	1713.0	1734.0	1732.0	1744.0
180°	1727.0	1727.0	1727.0	1727.0	1727.0	1727.0	1727.0	1727.0	1727.0

(END OF REPORT)