

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: P199449

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199449
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-U2-1-40-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-4000K, NO LENS
DOWNLIGHT LL1-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

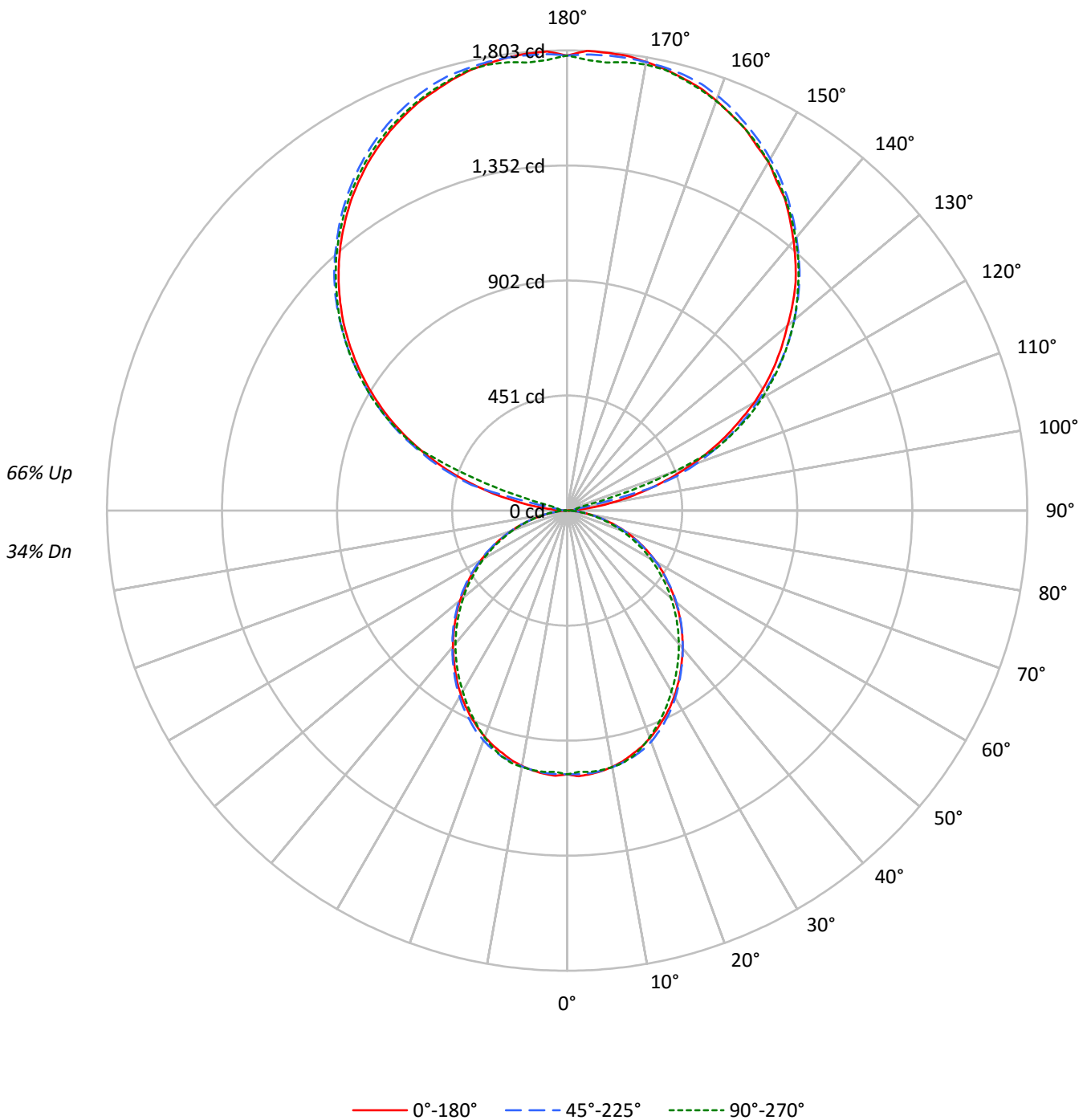
Lumens per Lamp: N/A
Luminaire Lumens: 8000.2 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: Semi-Indirect

Input Watts (W): 65.5
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				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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	36	36	35	29
2	86	79	73	68	77	71	66	62	57	53	50	44	42	40	32	31	29	24
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	27	25	20
4	71	61	53	47	64	55	49	44	45	40	36	35	31	29	25	23	21	17
5	65	54	46	40	59	49	42	37	40	35	31	31	27	25	23	21	19	15
6	60	48	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	15	12
8	52	40	32	27	46	36	29	25	29	24	21	23	20	17	17	15	13	10
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	14	12	9
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10894	10894	10894
5°	10887	9620	10871
10°	10743	8639	10705
15°	10526	7755	10473
20°	10300	6859	10246
25°	10015	6052	9951
30°	9716	5333	9633
35°	9356	4717	9244
40°	8998	4146	8897
45°	8617	3618	8490
50°	8205	3122	8089
55°	7749	2651	7620
60°	7331	2215	7110
65°	6770	1777	6501
70°	6071	1355	5753
75°	5091	934	4721
80°	3809	559	3406
85°	2160	239	1906



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	1.2
10°-20°	279.6	3.5
20°-30°	413.3	5.2
30°-40°	481.0	6.0
40°-50°	482.7	6.0
50°-60°	422.5	5.3
60°-70°	312.1	3.9
70°-80°	170.4	2.1
80°-90°	44.1	0.6
90°-100°	41.4	0.5
100°-110°	293.5	3.7
110°-120°	702.4	8.8
120°-130°	909.3	11.4
130°-140°	986.9	12.3
140°-150°	934.2	11.7
150°-160°	763.1	9.5
160°-170°	495.8	6.2
170°-180°	170.1	2.1
0°-30°	790.9	9.9
0°-40°	1271.9	15.9
0°-60°	2177.1	27.2
0°-90°	2703.6	33.8
90°-120°	1037.3	13.0
90°-150°	3867.6	48.3
90°-180°	5297.0	66.2
0°-180°	8000.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1033	1033	1033	1033	1033	
5°	1037	1033	1028	1032	1035	98
15°	988	1000	996	996	983	279
25°	898	910	884	905	892	414
35°	774	776	751	772	764	484
45°	631	633	607	628	622	487
55°	477	479	453	475	469	428
65°	325	321	300	313	312	321
75°	168	164	151	155	156	179
85°	37	39	36	35	32	43
90°	2	4	3	4	1	4
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: P199449

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1033.2	1033.2	1033.2	1033.2	1033.2	1033.2	1033.2	1033.2	1033.2
2.5°	1041.8	1031.0	1033.9	1032.5	1024.6	1032.5	1033.2	1030.3	1040.3
5°	1036.8	1027.4	1033.2	1031.0	1028.2	1031.0	1031.7	1026.0	1035.3
7.5°	1029.6	1021.7	1028.2	1027.4	1026.0	1027.4	1026.7	1018.8	1027.4
10°	1019.6	1012.4	1021.0	1022.4	1020.3	1021.7	1018.1	1010.2	1016.0
12.5°	1005.9	1000.2	1010.9	1013.8	1012.4	1013.1	1008.1	996.6	1002.3
15°	988.0	985.1	999.5	1001.6	995.9	999.5	995.9	981.6	983.0
17.5°	970.8	967.9	983.7	980.8	972.9	978.7	979.4	963.6	965.1
20°	948.6	947.1	963.6	955.0	945.0	952.2	958.6	942.8	943.6
22.5°	924.2	925.6	937.8	925.6	915.6	922.8	934.9	919.9	918.5
25°	897.7	902.0	909.9	895.5	884.0	891.9	904.8	896.2	891.9
27.5°	870.4	876.9	879.7	863.3	851.8	859.7	876.2	870.4	863.3
30°	840.3	848.2	847.5	830.3	817.4	826.0	843.2	842.5	833.1
32.5°	807.3	818.1	812.3	795.9	785.1	791.6	808.8	810.9	800.2
35°	773.6	785.1	776.5	760.7	751.4	757.9	772.2	778.6	764.3
37.5°	739.2	750.7	740.6	725.6	716.3	722.7	736.3	744.2	730.6
40°	704.1	714.8	704.8	691.9	680.4	687.6	699.8	708.4	696.2
42.5°	668.2	679.7	668.9	656.0	643.9	653.2	663.9	672.5	659.6
45°	630.9	643.1	633.1	618.0	606.6	615.9	628.1	635.2	621.6
47.5°	592.9	607.3	595.8	580.0	568.6	577.9	590.8	598.0	585.1
50°	554.9	567.1	558.5	542.0	530.6	539.2	553.5	559.2	547.1
52.5°	516.2	530.6	520.5	504.0	493.3	500.5	514.1	520.5	507.6
55°	476.8	488.3	478.9	465.3	453.1	461.7	474.6	478.9	468.9
57.5°	442.4	451.0	442.4	427.3	415.9	422.3	434.5	440.2	430.2
60°	402.9	410.8	402.2	387.9	377.9	383.6	393.6	400.8	390.8
62.5°	363.5	371.4	361.4	348.5	339.1	345.6	354.2	360.6	351.3
65°	324.8	332.0	321.2	309.7	300.4	306.9	313.3	320.5	311.9
67.5°	285.4	291.8	281.8	270.3	262.4	267.4	273.2	280.3	273.2
70°	246.6	251.7	243.1	232.3	225.1	229.4	234.5	240.2	233.7
72.5°	207.9	214.4	203.6	195.0	188.6	190.0	195.7	200.0	195.0
75°	167.8	172.1	164.2	157.0	151.3	152.7	154.9	161.3	155.6
77.5°	130.5	135.5	129.1	122.6	118.3	119.7	120.5	124.8	119.0
80°	95.4	99.7	95.4	90.3	87.5	88.2	88.2	91.1	85.3
82.5°	63.8	68.1	65.2	61.7	60.9	59.5	59.5	61.7	55.9
85°	36.6	41.6	39.4	36.6	35.8	35.1	35.1	36.6	32.3
87.5°	16.5	20.1	17.9	15.8	14.3	13.6	13.6	15.8	12.2
90°	2.2	5.0	4.3	2.9	2.9	2.9	3.6	4.3	1.4
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)