

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735931

Luminaire Tested: S122RDRP-S675D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735931
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S675D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

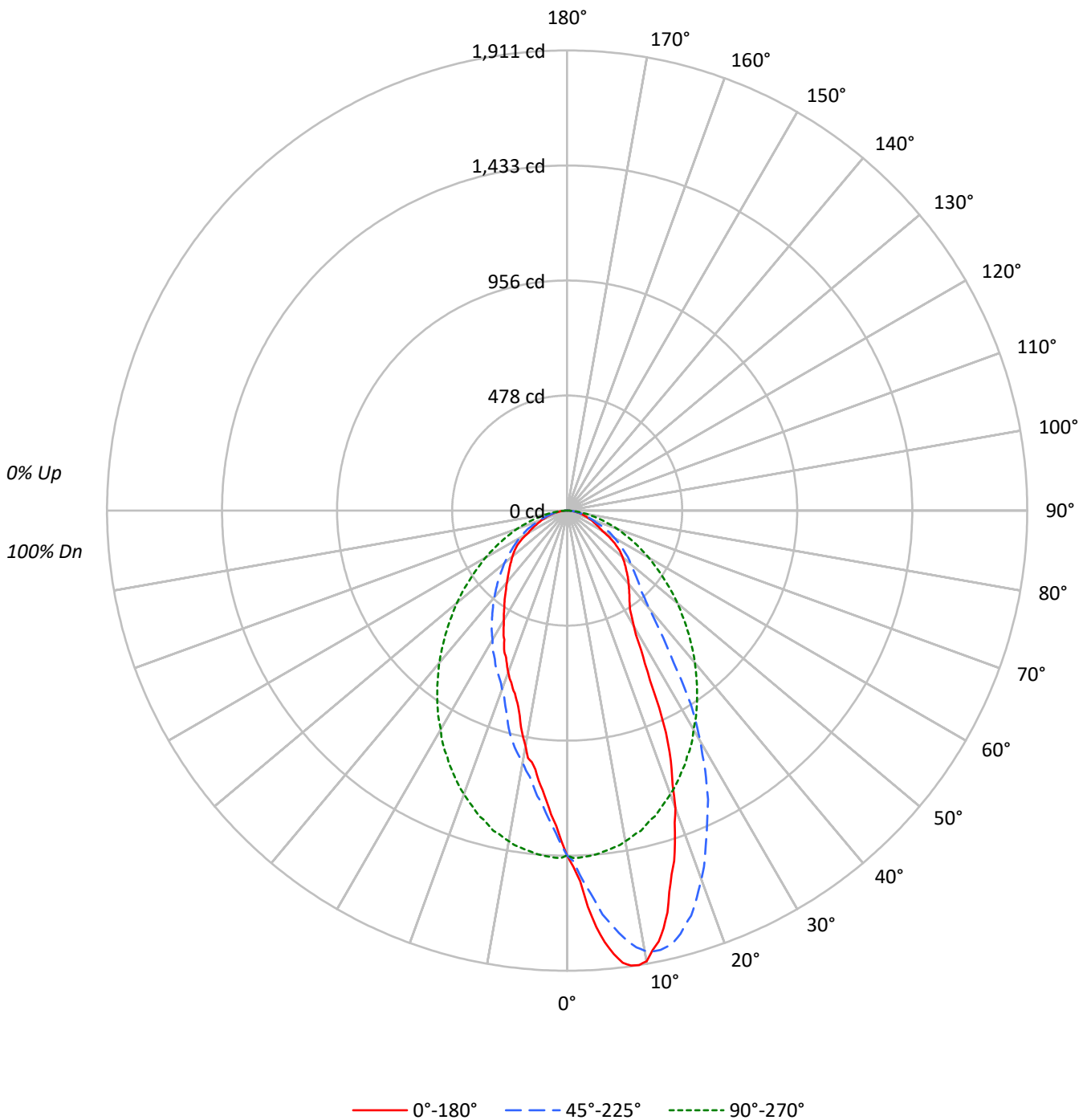
Lumens per Lamp: N/A
Luminaire Lumens: 2453.4 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 26.3
Input Voltage (V): 120
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: 24 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	27521	27521	27521	27521	27521
5°	34721	32479	27626	23474	22476
10°	37088	36215	27208	20771	19410
15°	32621	36203	26488	18624	16174
20°	26892	33321	25642	16168	14635
25°	19172	29253	24614	14973	13166
30°	12269	24536	23296	13741	11694
35°	10566	18082	22083	12748	10606
40°	9959	13221	20718	11796	9743
45°	9408	11327	19262	10930	9199
50°	8959	10326	17894	10170	8857
55°	8224	9551	16360	9350	8542
60°	6489	8703	15027	8773	7216
65°	5872	7791	13626	8146	6577
70°	5418	6289	12386	7014	6047
75°	5050	5689	10806	6268	5689
80°	4671	5147	9154	5623	5147
85°	4168	4565	7035	4940	4565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 26963 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.9	5.7
10°-20°	373.1	15.2
20°-30°	468.0	19.1
30°-40°	446.0	18.2
40°-50°	393.4	16.0
50°-60°	309.5	12.6
60°-70°	197.5	8.0
70°-80°	100.4	4.1
80°-90°	26.6	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	980.0	39.9
0°-40°	1426.0	58.1
0°-60°	2128.9	86.8
0°-90°	2453.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2453.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1432	1432	1432	1432	1432	
5°	1800	1683	1432	1217	1165	175
15°	1639	1819	1331	936	813	454
25°	904	1379	1161	706	621	407
35°	450	771	941	543	452	286
45°	346	417	709	402	338	268
55°	245	285	488	279	255	216
65°	129	171	300	179	145	129
75°	68	77	146	84	77	72
85°	19	21	32	22	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1431.8	1431.8	1431.8	1431.8	1431.8	1431.8	1431.8	1431.8	1431.8
1°	1480.1	1486.9	1455.1	1458.5	1443.0	1415.5	1388.8	1391.4	1372.4
2°	1539.5	1557.5	1513.6	1486.9	1442.2	1394.0	1340.6	1333.7	1310.4
3°	1647.1	1638.5	1566.2	1511.9	1438.7	1366.4	1299.2	1283.7	1263.9
4°	1734.1	1708.2	1619.5	1543.8	1437.0	1334.5	1258.8	1232.1	1212.3
5°	1799.5	1766.8	1683.3	1567.9	1431.8	1316.5	1216.6	1186.5	1164.9
6°	1852.0	1827.0	1724.6	1590.3	1425.0	1289.8	1191.6	1151.2	1128.8
7°	1892.5	1871.8	1766.8	1620.4	1418.9	1263.1	1152.0	1109.8	1083.1
8°	1908.0	1898.5	1805.5	1641.9	1412.0	1244.1	1116.7	1078.8	1054.7
9°	1910.6	1911.4	1836.5	1662.6	1406.0	1209.7	1091.7	1053.0	1040.1
10°	1900.2	1908.0	1855.5	1685.8	1394.0	1192.5	1064.2	1027.2	994.5
11°	1859.8	1894.2	1864.9	1701.3	1383.6	1164.9	1040.1	991.9	959.2
12°	1829.6	1862.3	1865.8	1721.1	1371.6	1152.0	1019.4	954.8	920.4
13°	1779.7	1814.1	1857.2	1726.3	1364.7	1120.2	993.6	917.0	874.8
14°	1720.3	1775.4	1843.4	1737.5	1347.5	1092.6	967.8	863.6	838.6
15°	1639.3	1717.7	1819.3	1741.8	1331.1	1073.7	935.9	836.9	812.8
16°	1572.2	1660.9	1786.6	1741.8	1320.8	1047.8	901.5	813.6	789.5
17°	1521.4	1593.7	1759.9	1742.7	1303.6	1029.8	867.0	792.1	773.2
18°	1449.9	1530.9	1717.7	1739.2	1285.5	1008.2	837.8	774.0	750.8
19°	1370.7	1467.1	1672.9	1733.2	1270.0	985.8	806.8	755.1	735.3
20°	1314.7	1403.4	1629.0	1723.7	1253.6	971.2	790.4	733.6	715.5
21°	1220.9	1329.4	1585.1	1710.8	1236.4	946.2	768.0	714.6	694.8
22.5°	1125.3	1225.2	1504.2	1689.3	1208.0	915.2	743.0	691.4	662.1
23°	1088.3	1200.2	1479.2	1683.3	1198.5	907.5	735.3	681.0	655.2
24°	1009.1	1125.3	1427.5	1664.3	1177.8	881.7	720.7	660.4	642.3
25°	904.0	1061.6	1379.3	1644.5	1160.6	862.7	706.0	644.0	620.8
26°	785.2	974.7	1335.4	1620.4	1136.5	836.9	686.2	628.5	595.8
27°	712.0	899.7	1276.0	1594.6	1119.3	817.9	669.9	605.3	582.0
28°	653.5	781.8	1222.6	1569.6	1098.6	794.7	658.7	588.9	561.4
29°	589.8	717.2	1159.8	1536.0	1076.2	768.0	640.6	572.6	543.3
30°	552.8	648.3	1105.5	1511.1	1049.6	749.9	619.1	556.2	526.9
32.5°	485.6	534.7	958.3	1439.6	998.8	698.3	583.8	511.4	486.5
35°	450.3	476.1	770.6	1356.1	941.1	655.2	543.3	474.4	452.0
37.5°	423.6	439.1	636.3	1266.5	882.5	617.3	506.3	440.0	418.4
40°	396.9	409.0	526.9	1180.4	825.7	580.3	470.1	404.7	388.3
42.5°	372.8	382.3	457.2	1095.2	767.1	542.4	434.8	377.1	362.5
45°	346.1	354.7	416.7	991.9	708.6	503.7	402.1	347.0	338.4
47.5°	323.7	329.8	378.0	899.7	650.9	466.7	368.5	322.9	316.8
50°	299.6	307.4	345.3	797.3	598.4	430.5	340.1	301.3	296.2
52.5°	276.4	279.8	317.7	694.8	543.3	395.2	310.0	279.8	276.4
55°	245.4	259.2	285.0	589.8	488.2	362.5	279.0	257.4	254.9
57.5°	210.1	228.2	255.7	495.1	436.5	326.3	254.0	236.8	225.6
60°	168.8	190.3	226.4	411.6	390.9	293.6	228.2	201.5	187.7
62.5°	148.1	155.0	199.8	344.4	344.4	262.6	202.3	173.1	167.0
65°	129.1	134.3	171.3	285.0	299.6	228.2	179.1	149.8	144.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	112.8	<i>117.1</i>	130.9	237.6	258.3	198.9	148.1	130.9	124.8
70°	96.4	<i>99.9</i>	111.9	193.7	220.4	169.6	124.8	111.9	107.6
72.5°	81.8	<i>85.2</i>	92.1	145.5	180.8	141.2	105.0	95.6	92.1
75°	68.0	<i>69.7</i>	76.6	108.5	145.5	112.8	84.4	78.4	76.6
77.5°	55.1	<i>56.0</i>	60.3	77.5	112.8	86.1	68.0	62.9	62.0
80°	42.2	<i>43.0</i>	46.5	56.0	82.7	62.0	50.8	48.2	46.5
82.5°	30.1	<i>31.0</i>	32.7	37.9	56.0	42.2	36.2	35.3	32.7
85°	18.9	<i>18.9</i>	20.7	23.2	31.9	24.1	22.4	21.5	20.7
87.5°	8.6	<i>8.6</i>	9.5	9.5	14.6	10.3	10.3	9.5	8.6
90°	0.0	<i>0.0</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.95	19.42	18.32	19.73	20.05	20.65	22.12	21.01	22.43	22.74
	3H	19.07	20.38	19.45	20.71	21.07	22.09	23.40	22.47	23.73	24.09
	4H	19.51	20.74	19.91	21.09	21.47	22.59	23.82	22.99	24.17	24.55
	6H	19.85	20.99	20.27	21.36	21.75	22.92	24.05	23.33	24.42	24.81
	8H	19.97	21.05	20.40	21.44	21.84	23.01	24.09	23.43	24.48	24.88
	12H	20.04	21.08	20.47	21.46	21.89	23.05	24.09	23.48	24.47	24.90
4H	2H	19.12	20.35	19.52	20.70	21.08	21.10	22.33	21.50	22.68	23.06
	3H	20.35	21.37	20.76	21.77	22.17	22.76	23.78	23.17	24.18	24.58
	4H	20.83	21.74	21.26	22.16	22.60	23.40	24.31	23.83	24.73	25.17
	6H	21.23	22.03	21.69	22.47	22.93	23.85	24.65	24.31	25.09	25.55
	8H	21.36	22.11	21.83	22.55	23.02	23.98	24.72	24.44	25.17	25.64
	12H	21.46	22.13	21.95	22.61	23.08	24.06	24.72	24.54	25.20	25.67
8H	4H	21.23	21.97	21.69	22.42	22.89	23.51	24.25	23.97	24.70	25.17
	6H	21.72	22.33	22.22	22.83	23.30	24.07	24.68	24.57	25.18	25.65
	8H	21.91	22.46	22.43	22.97	23.46	24.27	24.82	24.79	25.33	25.82
	12H	22.07	22.55	22.58	23.05	23.61	24.42	24.90	24.93	25.40	25.96
12H	4H	21.28	21.94	21.76	22.42	22.89	23.50	24.16	23.98	24.64	25.11
	6H	21.79	22.34	22.31	22.85	23.34	24.07	24.62	24.58	25.13	25.62
	8H	22.03	22.52	22.54	23.01	23.58	24.31	24.80	24.83	25.29	25.86