

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: P735886

Luminaire Tested: S122DRP-S675D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
Report Number: P735886  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S675D935-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

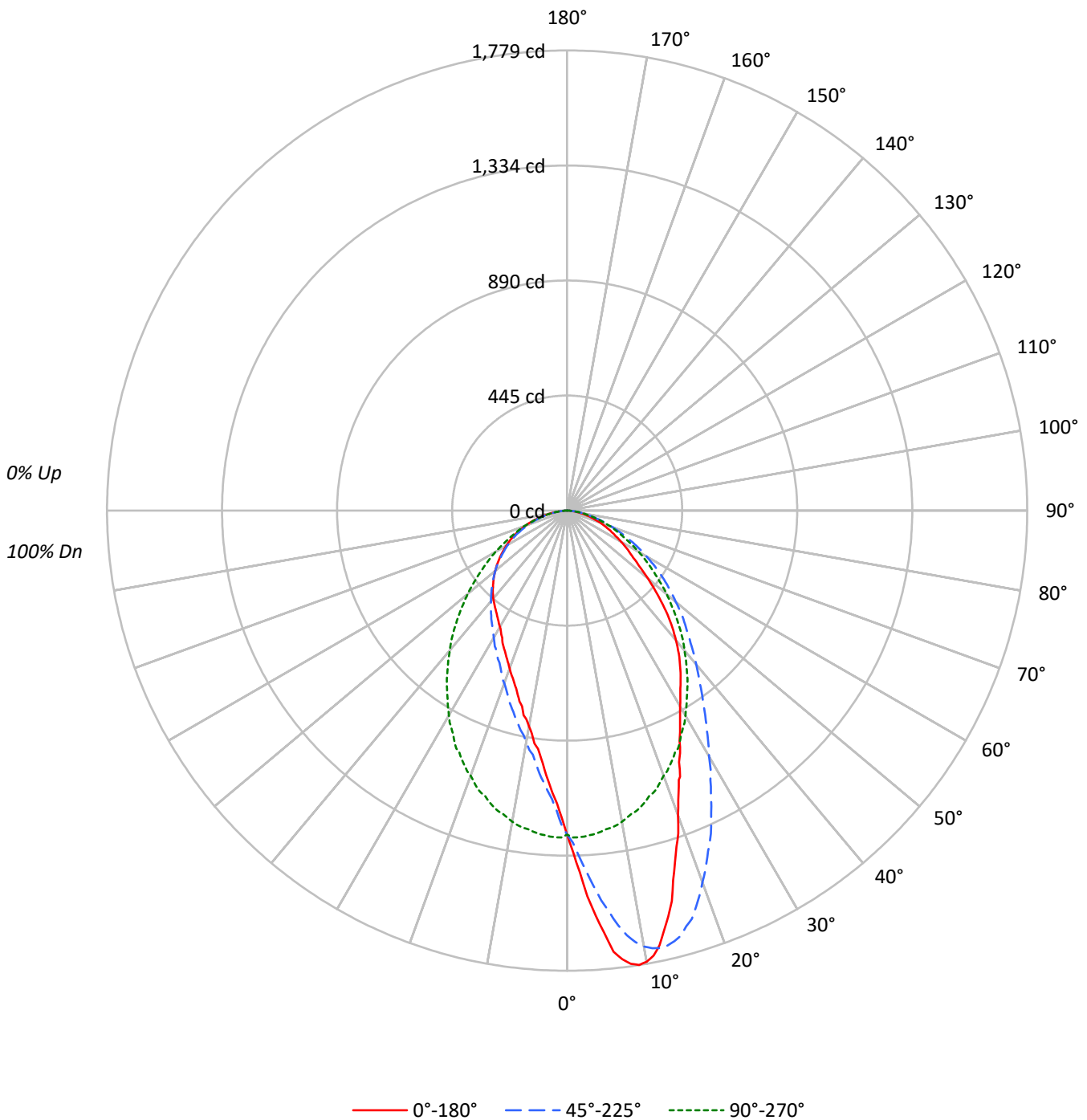
Lumens per Lamp: N/A  
Luminaire Lumens: 2548.9 lumens  
Efficiency: N/A  
Efficacy: 98.0 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

Input Watts (W): 26  
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

TEST NUMBER: P735886

CATALOG NUMBER: S122DRP-S675D935-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot





TEST NUMBER: P735886

CATALOG NUMBER: S122DRP-S675D935-X4F0-XX-UDD-W-W

**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	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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	24080	24080	24080	24080	24080
5°	31582	29189	24205	20300	19370
10°	34568	33409	23847	17746	16535
15°	31097	33839	23199	16019	14666
20°	25661	31296	22314	14529	13298
25°	21932	27921	21529	13440	12326
30°	19396	24383	20295	12593	11541
35°	17941	21597	19032	12000	11214
40°	16420	19486	17715	11494	11148
45°	14464	17789	16383	11140	11001
50°	12179	16402	15011	10840	10864
55°	10244	15090	13562	10472	10677
60°	9234	13636	12313	10160	10460
65°	8382	11984	10966	9674	10261
70°	7548	10358	9869	8953	9728
75°	6587	8763	8444	8117	8890
80°	5523	6863	6863	7051	7438
85°	4168	4940	5117	5513	5315

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 26120 cd/sqm



TEST NUMBER: P735886

CATALOG NUMBER: S122DRP-S675D935-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.3	4.8
10°-20°	338.4	13.3
20°-30°	443.7	17.4
30°-40°	469.0	18.4
40°-50°	435.4	17.1
50°-60°	348.5	13.7
60°-70°	238.4	9.4
70°-80°	123.0	4.8
80°-90°	29.2	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°	905.4	35.5
0°-40°	1374.4	53.9
0°-60°	2158.3	84.7
0°-90°	2548.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2548.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1253	1253	1253	1253	1253	
5°	1637	1513	1254	1052	1004	161
15°	1563	1700	1166	805	737	429
25°	1034	1316	1015	634	581	477
35°	765	920	811	511	478	477
45°	532	654	603	410	405	409
55°	306	450	405	312	319	280
65°	184	264	241	213	226	183
75°	89	118	114	109	120	94
85°	19	22	23	25	24	23
90°	0	0	0	0	0	



TEST NUMBER: P735886

CATALOG NUMBER: S122DRP-S675D935-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8
1°	1321.6	1314.7	1284.6	1286.3	1263.9	1239.0	1215.7	1201.1	1189.0
2°	1399.1	1385.3	1338.0	1314.7	1263.9	1210.6	1162.3	1149.4	1133.1
3°	1493.0	1460.3	1394.8	1339.7	1262.2	1184.7	1118.4	1095.2	1092.6
4°	1568.7	1539.5	1452.5	1365.5	1257.9	1159.8	1084.9	1059.9	1047.8
5°	1636.8	1617.8	1512.8	1398.3	1254.5	1135.7	1052.1	1017.7	1003.9
6°	1715.1	1676.4	1561.0	1431.0	1248.4	1112.4	1022.9	981.5	962.6
7°	1747.0	1722.9	1615.2	1452.5	1240.7	1085.7	985.8	941.1	927.3
8°	1769.3	1759.9	1658.3	1487.8	1237.3	1060.7	953.1	925.6	909.2
9°	1778.8	1771.1	1689.3	1502.4	1231.2	1047.8	936.8	891.1	873.1
10°	1771.1	1774.5	1711.7	1524.8	1221.8	1021.1	909.2	869.6	847.2
11°	1753.0	1761.6	1723.7	1550.7	1209.7	999.6	884.2	843.8	822.3
12°	1718.6	1737.5	1728.9	1568.7	1198.5	980.7	867.0	828.3	809.3
13°	1665.2	1707.4	1725.4	1576.5	1191.6	959.2	845.5	800.7	776.6
14°	1617.0	1660.9	1716.0	1593.7	1179.6	935.0	825.7	780.9	760.3
15°	1562.7	1613.5	1700.5	1598.9	1165.8	915.2	805.0	756.0	737.0
16°	1486.9	1555.0	1672.1	1604.9	1149.4	892.9	786.1	739.6	714.6
17°	1424.1	1497.3	1650.5	1608.3	1140.8	875.6	769.7	714.6	698.3
18°	1366.4	1449.1	1611.8	1605.8	1127.0	855.8	745.6	696.5	681.0
19°	1320.8	1387.9	1573.0	1599.7	1108.1	836.9	727.5	683.6	665.6
20°	1254.5	1332.0	1530.0	1597.1	1090.9	819.7	710.3	665.6	650.1
21°	1199.4	1278.6	1490.4	1588.5	1078.8	803.3	697.4	648.3	634.6
22.5°	1127.0	1196.8	1424.1	1572.2	1052.1	775.8	669.0	632.0	613.0
23°	1118.4	1177.8	1406.9	1567.0	1044.4	769.7	659.5	622.5	607.0
24°	1064.2	1127.0	1366.4	1550.7	1024.6	750.8	644.0	611.3	593.2
25°	1034.1	1085.7	1316.5	1535.2	1015.1	733.6	633.7	596.7	581.2
26°	991.9	1051.3	1271.7	1512.8	994.5	718.1	617.3	583.8	569.1
27°	960.9	1010.8	1225.2	1496.4	970.3	701.7	604.4	570.8	552.8
28°	930.7	979.0	1180.4	1469.7	953.1	683.6	594.9	559.6	542.4
29°	899.7	941.9	1144.3	1449.1	936.8	668.1	580.3	545.0	528.7
30°	873.9	912.7	1098.6	1421.5	914.4	650.1	567.4	534.7	520.0
32.5°	814.5	847.2	1005.6	1356.1	861.0	613.9	536.4	506.3	497.7
35°	764.6	786.1	920.4	1282.9	811.1	575.1	511.4	482.2	477.9
37.5°	712.0	732.7	842.9	1206.3	758.5	539.8	483.0	464.1	460.6
40°	654.4	681.9	776.6	1130.5	706.0	505.4	458.1	443.4	444.3
42.5°	596.7	628.5	712.0	1041.8	656.9	472.7	433.9	423.6	425.3
45°	532.1	572.6	654.4	960.9	602.7	441.7	409.8	404.7	404.7
47.5°	464.9	516.6	604.4	877.4	551.0	410.7	386.6	383.1	384.9
50°	407.3	453.7	548.5	796.4	502.0	382.3	362.5	361.6	363.3
52.5°	350.4	396.9	499.4	720.7	452.0	356.5	339.2	339.2	341.0
55°	305.7	341.8	450.3	641.4	404.7	326.3	312.5	315.1	318.6
57.5°	274.7	298.8	402.1	565.7	360.8	297.0	288.4	290.2	294.5
60°	240.2	259.2	354.7	495.9	320.3	268.6	264.3	267.8	272.1
62.5°	209.2	225.6	310.0	433.1	276.4	241.1	239.4	244.5	248.8
65°	184.3	195.4	263.5	369.4	241.1	213.5	212.7	220.4	225.6



TEST NUMBER: P735886

CATALOG NUMBER: S122DRP-S675D935-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	158.4	167.0	223.0	309.1	205.8	186.0	186.0	194.6	198.9
70°	134.3	141.2	184.3	254.9	175.6	158.4	159.3	169.6	173.1
72.5°	109.3	115.4	149.8	204.9	142.1	132.6	135.2	143.8	147.2
75°	88.7	93.0	118.0	161.9	113.7	105.9	109.3	117.1	119.7
77.5°	68.0	71.5	87.0	118.8	87.0	82.7	86.1	93.0	93.0
80°	49.9	50.8	62.0	83.5	62.0	59.4	63.7	67.2	67.2
82.5°	32.7	34.4	40.5	53.4	41.3	40.5	42.2	44.8	44.8
85°	18.9	19.8	22.4	29.3	23.2	23.2	25.0	25.0	24.1
87.5°	7.7	8.6	9.5	11.2	10.3	11.2	11.2	9.5	10.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P735886  
 CATALOG NUMBER: S122DRP-S675D935-X4F0-XX-UDD-W-W

**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	20.27	21.79	20.64	22.11	22.42	19.85	21.37	20.21	21.68	22.00
	3H	21.47	22.84	21.85	23.17	23.53	21.36	22.73	21.74	23.05	23.42
	4H	21.87	23.15	22.27	23.50	23.88	21.89	23.17	22.29	23.52	23.90
	6H	22.12	23.31	22.54	23.68	24.07	22.24	23.43	22.65	23.79	24.18
	8H	22.19	23.31	22.61	23.70	24.11	22.34	23.47	22.76	23.85	24.26
	12H	22.22	23.30	22.65	23.68	24.11	22.39	23.47	22.82	23.85	24.28
4H	2H	21.33	22.61	21.73	22.96	23.34	20.92	22.20	21.32	22.55	22.93
	3H	22.69	23.76	23.10	24.16	24.56	22.54	23.61	22.95	24.01	24.41
	4H	23.15	24.11	23.59	24.53	24.97	23.13	24.08	23.56	24.50	24.94
	6H	23.47	24.30	23.92	24.74	25.20	23.55	24.38	24.00	24.82	25.28
	8H	23.54	24.32	24.01	24.77	25.23	23.66	24.44	24.13	24.89	25.35
	12H	23.59	24.29	24.07	24.77	25.24	23.74	24.43	24.22	24.91	25.38
8H	4H	23.51	24.29	23.97	24.73	25.20	23.47	24.25	23.93	24.69	25.16
	6H	23.91	24.55	24.41	25.05	25.52	23.99	24.63	24.48	25.12	25.60
	8H	24.03	24.61	24.55	25.12	25.61	24.15	24.73	24.67	25.24	25.73
	12H	24.12	24.63	24.63	25.12	25.69	24.28	24.79	24.79	25.28	25.84
12H	4H	23.53	24.23	24.01	24.71	25.18	23.48	24.18	23.97	24.66	25.13
	6H	23.96	24.53	24.47	25.04	25.53	24.03	24.61	24.54	25.12	25.60
	8H	24.13	24.63	24.63	25.13	25.69	24.25	24.75	24.75	25.25	25.81