

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735904

Luminaire Tested: S122RDR-S1005D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735904  
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: S122RDR-S1005D935-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: 3700.1 lumens  
Efficiency: N/A  
Efficacy: 88.5 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

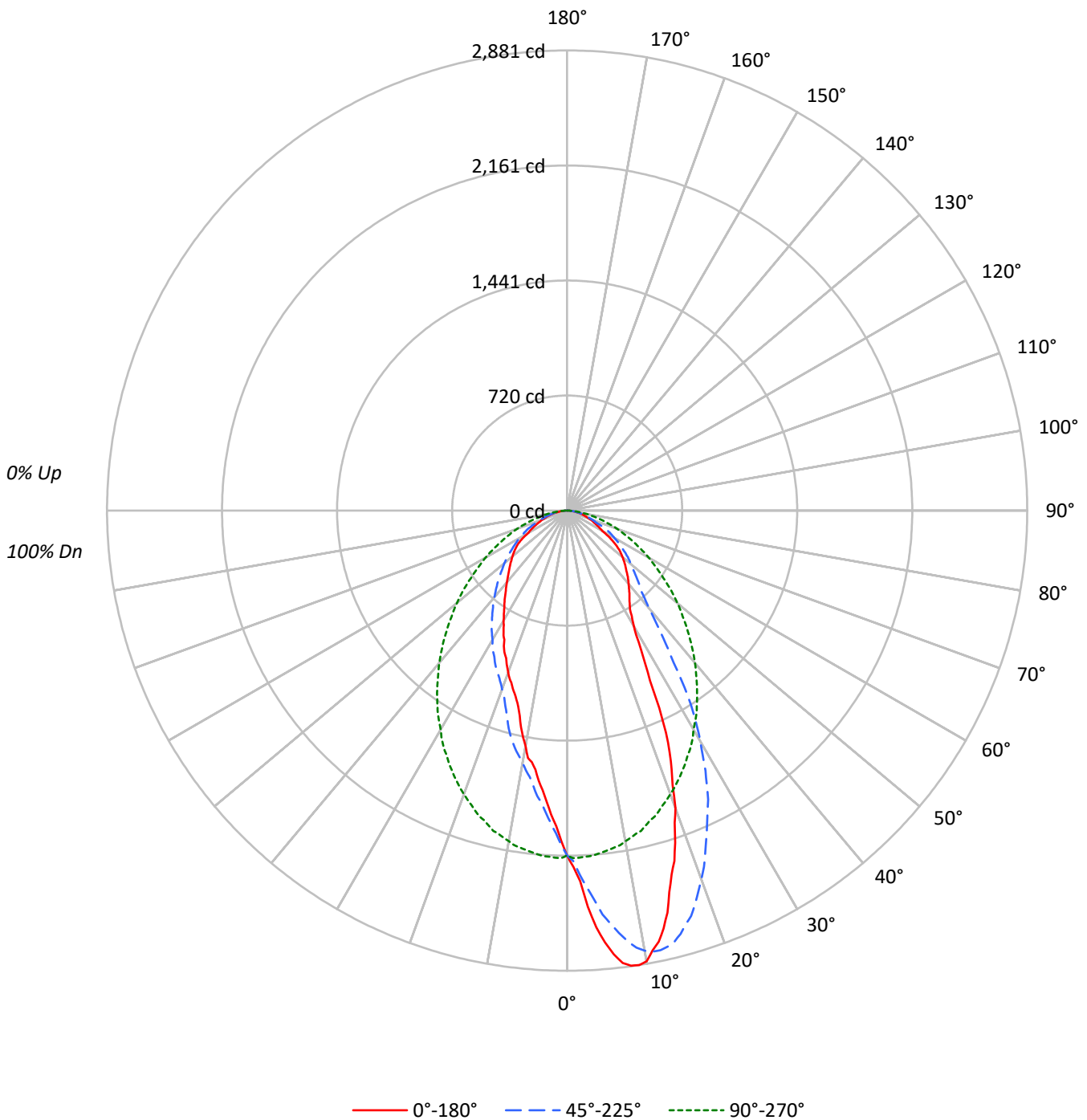
Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34					32				

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

	0°	45°	90°	135°	180°
0°	41506	41506	41506	41506	41506
5°	52364	48982	41665	35402	33899
10°	55934	54617	41032	31326	29273
15°	49199	54598	39948	28088	24393
20°	40558	50253	38672	24382	22073
25°	28915	44118	37123	22583	19855
30°	18502	37005	35132	20721	17638
35°	15935	27271	33304	19227	15996
40°	15020	19940	31247	17790	14694
45°	14190	17085	29050	16484	13871
50°	13513	15570	26987	15337	13358
55°	12403	14403	24674	14098	12882
60°	9784	13128	22662	13228	10883
65°	8860	11752	20553	12285	9919
70°	8171	9486	18681	10582	9121
75°	7620	8585	16294	9454	8585
80°	7040	7759	13803	8479	7759
85°	6307	6881	10586	7454	6881

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 40663 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.4	5.7
10°-20°	562.7	15.2
20°-30°	705.9	19.1
30°-40°	672.6	18.2
40°-50°	593.3	16.0
50°-60°	466.7	12.6
60°-70°	297.8	8.0
70°-80°	151.4	4.1
80°-90°	40.1	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°	1478.0	39.9
0°-40°	2150.6	58.1
0°-60°	3210.7	86.8
0°-90°	3700.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3700.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2159	2159	2159	2159	2159	
5°	2714	2539	2159	1835	1757	264
15°	2472	2744	2008	1412	1226	685
25°	1363	2080	1750	1065	936	615
35°	679	1162	1419	819	682	432
45°	522	628	1069	606	510	405
55°	370	430	736	421	384	325
65°	195	258	452	270	218	195
75°	103	116	219	127	116	109
85°	29	31	48	34	31	32
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°	2159.4	2159.4	2159.4	2159.4	2159.4	2159.4	2159.4	2159.4	2159.4
1°	2232.1	2194.5	2199.7	2176.3	2134.7	2094.5	2098.4	2069.8	
2°	2321.7	2282.8	2242.5	2175.0	2102.3	2021.8	2011.4	1976.3	
3°	2484.0	2362.0	2280.2	2169.8	2060.7	1959.4	1936.1	1906.2	
4°	2615.2	2442.5	2328.2	2167.2	2012.7	1898.4	1858.2	1828.3	
5°	2713.9	2538.6	2364.6	2159.4	1985.4	1834.8	1789.3	1756.9	
6°	2793.1	2600.9	2398.3	2149.0	1945.2	1797.1	1736.1	1702.3	
7°	2854.1	2664.5	2443.8	2139.9	1904.9	1737.4	1673.8	1633.5	
8°	2877.5	2723.0	2476.2	2129.5	1876.3	1684.2	1627.0	1590.7	
9°	2881.4	2769.7	2507.4	2120.5	1824.4	1646.5	1588.1	1568.6	
10°	2865.8	2798.3	2542.5	2102.3	1798.4	1605.0	1549.1	1499.8	
11°	2804.8	2812.6	2565.8	2086.7	1756.9	1568.6	1495.9	1446.5	
12°	2759.3	2813.9	2595.7	2068.5	1737.4	1537.4	1440.0	1388.1	
13°	2684.0	2800.9	2603.5	2058.1	1689.4	1498.5	1382.9	1319.3	
14°	2594.4	2780.1	2620.4	2032.2	1647.8	1459.5	1302.4	1264.7	
15°	2472.4	2743.7	2626.9	2007.5	1619.2	1411.5	1262.1	1225.8	
16°	2371.1	2694.4	2626.9	1991.9	1580.3	1359.5	1227.1	1190.7	
17°	2294.5	2654.1	2628.2	1965.9	1553.0	1307.6	1194.6	1166.1	
18°	2186.7	2590.5	2623.0	1938.7	1520.5	1263.4	1167.4	1132.3	
19°	2067.2	2523.0	2613.9	1915.3	1486.8	1216.7	1138.8	1108.9	
20°	1982.8	2456.8	2599.6	1890.6	1464.7	1192.0	1106.3	1079.1	
21°	1841.3	2390.5	2580.1	1864.7	1427.1	1158.3	1077.8	1047.9	
22.5°	1697.1	2268.5	2547.7	1821.8	1380.3	1120.6	1042.7	998.6	
23°	1641.3	2230.8	2538.6	1807.5	1368.6	1108.9	1027.1	988.2	
24°	1521.8	2152.9	2510.0	1776.4	1329.7	1086.8	996.0	968.7	
25°	1363.4	2080.2	2480.1	1750.4	1301.1	1064.8	971.3	936.2	
26°	1184.2	2014.0	2443.8	1714.0	1262.1	1034.9	947.9	898.6	
27°	1073.9	1924.4	2404.8	1688.1	1233.6	1010.2	912.8	877.8	
28°	985.6	1843.9	2367.2	1656.9	1198.5	993.4	888.2	846.6	
29°	889.5	1749.1	2316.5	1623.1	1158.3	966.1	863.5	819.4	
30°	833.6	1667.3	2278.9	1582.9	1131.0	933.6	838.8	794.7	
32.5°	732.4	1445.2	2171.1	1506.3	1053.1	880.4	771.3	733.7	
35°	679.1	1162.2	2045.1	1419.3	988.2	819.4	715.5	681.7	
37.5°	638.9	959.6	1910.1	1331.0	931.0	763.5	663.5	631.1	
40°	598.6	794.7	1780.3	1245.3	875.2	709.0	610.3	585.6	
42.5°	562.3	689.5	1651.7	1157.0	818.1	655.7	568.7	546.7	
45°	522.0	628.5	1495.9	1068.7	759.6	606.4	523.3	510.3	
47.5°	488.2	570.0	1356.9	981.7	703.8	555.8	486.9	477.8	
50°	451.9	520.7	1202.4	902.5	649.3	512.9	454.5	446.7	
52.5°	416.8	479.1	1047.9	819.4	596.0	467.5	422.0	416.8	
55°	370.1	429.8	889.5	736.3	546.7	420.7	388.3	384.4	
57.5°	316.8	385.7	746.6	658.3	492.1	383.1	357.1	340.2	
60°	254.5	341.5	620.7	589.5	442.8	344.1	303.9	283.1	
62.5°	223.3	301.3	519.4	519.4	396.0	305.1	261.0	251.9	
65°	194.8	258.4	429.8	451.9	344.1	270.1	225.9	218.1	



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	170.1	176.6	197.4	358.4	389.6	300.0	223.3	197.4	188.3
70°	145.4	150.6	168.8	292.2	332.4	255.8	188.3	168.8	162.3
72.5°	123.4	128.6	138.9	219.4	272.7	213.0	158.4	144.1	138.9
75°	102.6	105.2	115.6	163.6	219.4	170.1	127.3	118.2	115.6
77.5°	83.1	84.4	90.9	116.9	170.1	129.9	102.6	94.8	93.5
80°	63.6	64.9	70.1	84.4	124.7	93.5	76.6	72.7	70.1
82.5°	45.4	46.7	49.3	57.1	84.4	63.6	54.5	53.2	49.3
85°	28.6	28.6	31.2	35.1	48.0	36.4	33.8	32.5	31.2
87.5°	13.0	13.0	14.3	14.3	22.1	15.6	15.6	14.3	13.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)