

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: P735904

Luminaire Tested: S122RDRP-S1005D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122RDRP-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

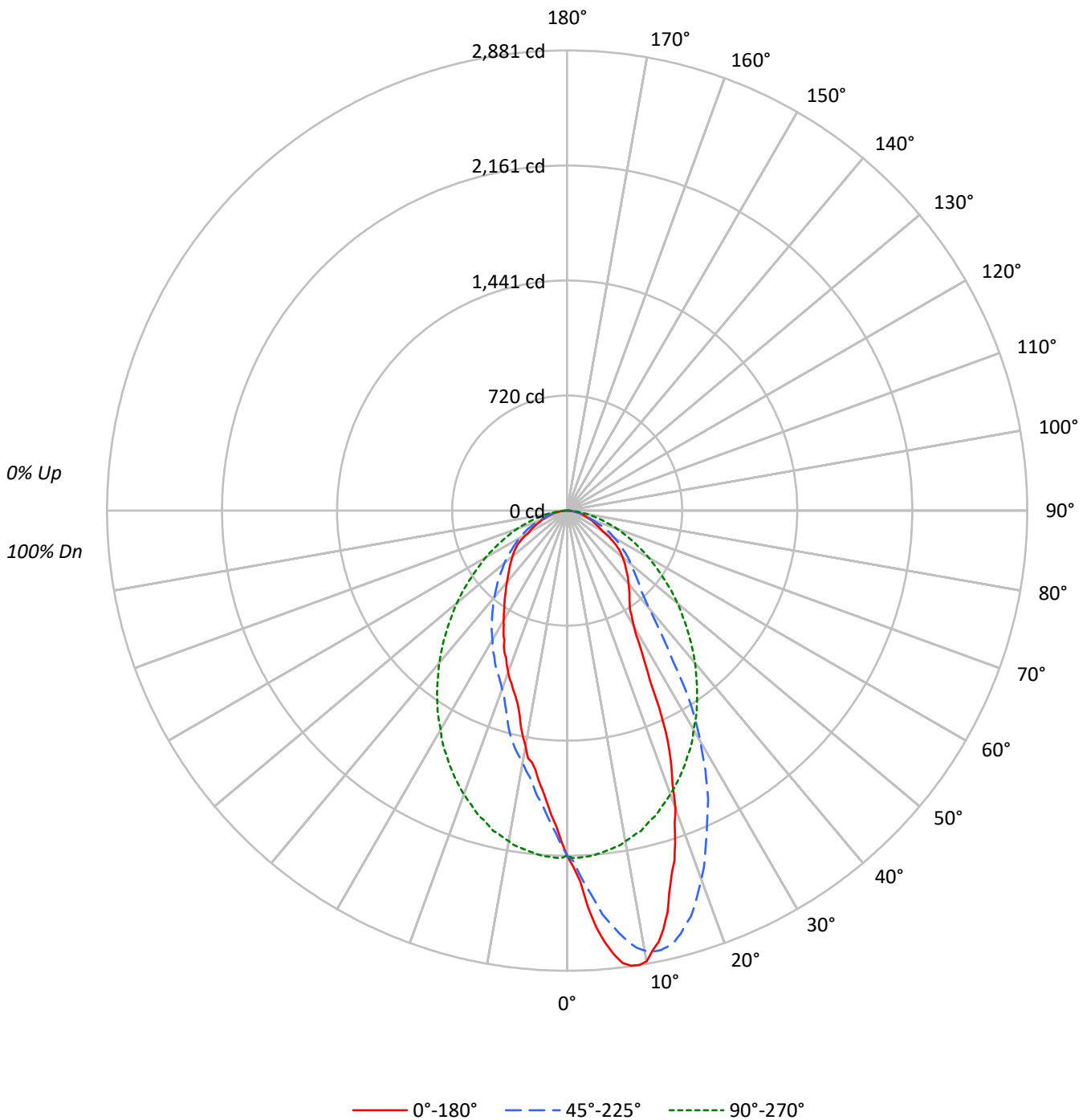
Lumens per Lamp: N/A
Luminaire Lumens: 3700.1 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (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: 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



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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	19.38	20.85	19.75	21.16	21.48	22.08	23.54	22.44	23.86	24.17
	3H	20.50	21.81	20.87	22.14	22.50	23.52	24.83	23.89	25.16	25.52
	4H	20.94	22.17	21.34	22.52	22.90	24.02	25.25	24.42	25.60	25.98
	6H	21.28	22.42	21.70	22.79	23.18	24.35	25.48	24.76	25.85	26.24
	8H	21.40	22.48	21.82	22.87	23.27	24.43	25.51	24.86	25.90	26.31
	12H	21.47	22.51	21.90	22.89	23.32	24.48	25.52	24.91	25.90	26.33
4H	2H	20.55	21.78	20.95	22.13	22.51	22.53	23.76	22.93	24.11	24.49
	3H	21.78	22.80	22.19	23.20	23.60	24.18	25.20	24.60	25.61	26.01
	4H	22.26	23.17	22.69	23.59	24.03	24.82	25.74	25.26	26.16	26.60
	6H	22.66	23.45	23.12	23.90	24.36	25.28	26.08	25.74	26.52	26.98
	8H	22.79	23.54	23.26	23.98	24.45	25.41	26.15	25.87	26.60	27.06
	12H	22.89	23.55	23.37	24.03	24.51	25.49	26.15	25.97	26.63	27.10
8H	4H	22.66	23.40	23.12	23.85	24.31	24.94	25.68	25.40	26.13	26.59
	6H	23.15	23.76	23.65	24.25	24.73	25.50	26.11	26.00	26.60	27.08
	8H	23.34	23.89	23.85	24.40	24.89	25.70	26.25	26.21	26.76	27.25
	12H	23.50	23.98	24.01	24.47	25.04	25.85	26.33	26.36	26.82	27.39
12H	4H	22.71	23.37	23.19	23.85	24.32	24.93	25.59	25.41	26.07	26.54
	6H	23.22	23.77	23.73	24.28	24.77	25.50	26.05	26.01	26.56	27.05
	8H	23.46	23.95	23.97	24.44	25.00	25.74	26.23	26.25	26.72	27.29