

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: P735927

Luminaire Tested: S122RDRP-S675D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735927
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-S675D840-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

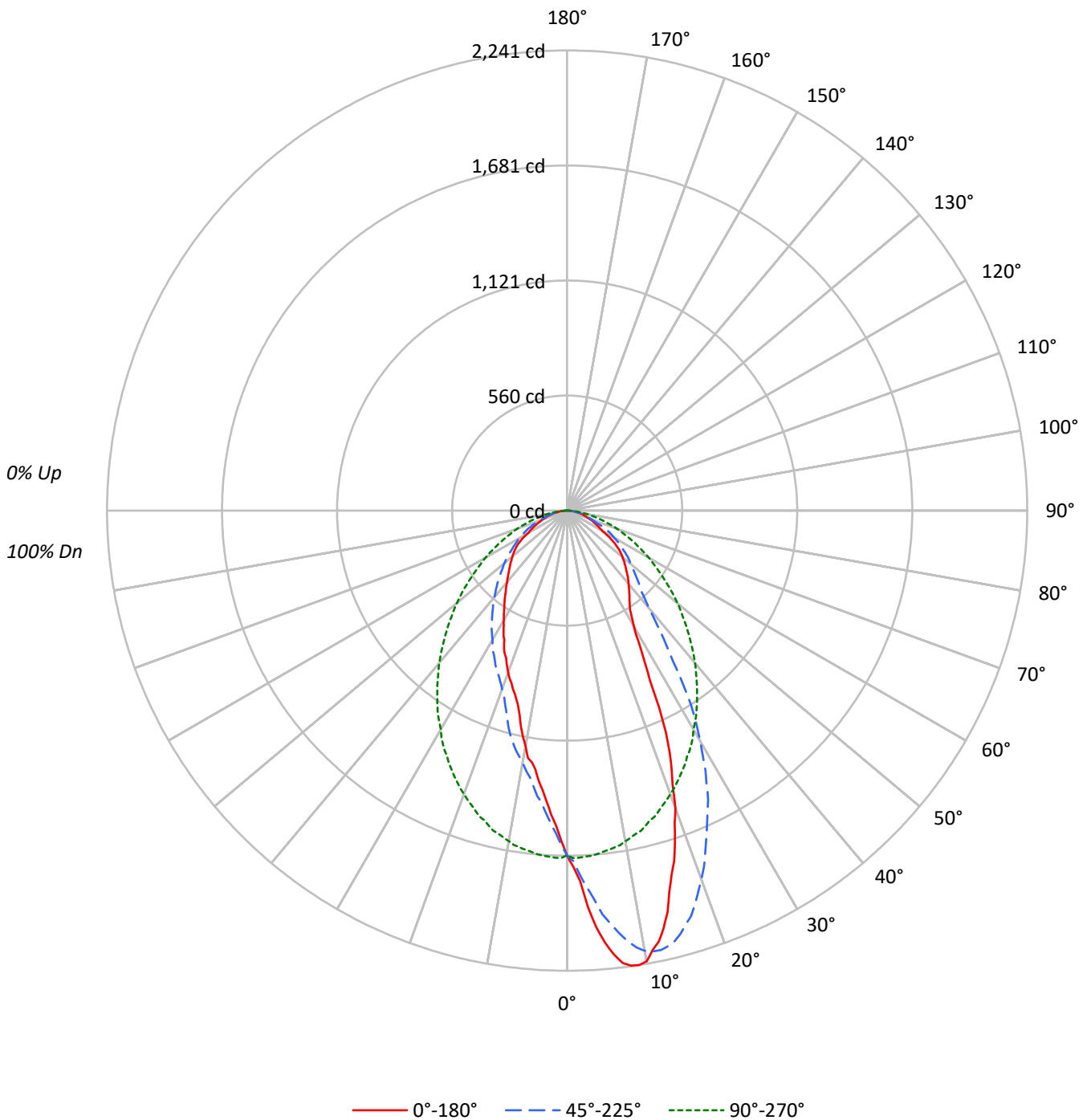
Lumens per Lamp: N/A
Luminaire Lumens: 2877.6 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 26.3
Input Voltage (V): 120
Input Current (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°	32280	32280	32280	32280	32280
5°	40723	38094	32404	27532	26362
10°	43501	42477	31912	24362	22766
15°	38262	42461	31069	21843	18970
20°	31543	39083	30077	18964	17166
25°	22489	34311	28871	17563	15442
30°	14389	28780	27322	16116	13716
35°	12394	21208	25900	14952	12441
40°	11680	15507	24301	13836	11427
45°	11036	13287	22592	12819	10789
50°	10508	12111	20989	11928	10388
55°	9645	11203	19189	10965	10017
60°	7608	10210	17626	10287	8465
65°	6890	9142	15982	9556	7718
70°	6356	7379	14528	8228	7092
75°	5926	6676	12677	7352	6676
80°	5479	6033	10726	6597	6033
85°	4896	5337	8248	5800	5337

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 31625 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.9	5.7
10°-20°	437.7	15.2
20°-30°	549.0	19.1
30°-40°	523.1	18.2
40°-50°	461.5	16.0
50°-60°	363.0	12.6
60°-70°	231.6	8.0
70°-80°	117.7	4.1
80°-90°	31.2	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°	1149.5	39.9
0°-40°	1672.6	58.1
0°-60°	2497.0	86.8
0°-90°	2877.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2877.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1679	1679	1679	1679	1679	
5°	2111	1974	1679	1427	1366	205
15°	1923	2134	1561	1098	953	533
25°	1060	1618	1361	828	728	478
35°	528	904	1104	637	530	336
45°	406	489	831	472	397	315
55°	288	334	573	327	299	253
65°	152	201	351	210	170	152
75°	80	90	171	99	90	85
85°	22	24	37	26	24	25
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°	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4
1°	1736.0	1744.0	1706.7	1710.7	1692.5	1660.2	1628.9	1631.9	1609.7
2°	1805.6	1826.8	1775.3	1744.0	1691.5	1635.0	1572.4	1564.3	1537.0
3°	1931.9	1921.8	1836.9	1773.3	1687.5	1602.7	1523.9	1505.7	1482.5
4°	2033.9	2003.6	1899.6	1810.7	1685.5	1565.3	1476.4	1445.1	1421.9
5°	2110.6	2072.2	1974.3	1839.0	1679.4	1544.1	1426.9	1391.6	1366.3
6°	2172.2	2142.9	2022.8	1865.2	1671.3	1512.8	1397.7	1350.2	1323.9
7°	2219.7	2195.4	2072.2	1900.6	1664.3	1481.5	1351.2	1301.7	1270.4
8°	2237.9	2226.8	2117.7	1925.8	1656.2	1459.3	1309.8	1265.4	1237.1
9°	2240.9	2241.9	2154.0	1950.1	1649.1	1418.9	1280.5	1235.1	1219.9
10°	2228.8	2237.9	2176.3	1977.3	1635.0	1398.7	1248.2	1204.8	1166.4
11°	2181.3	2221.7	2187.4	1995.5	1622.9	1366.3	1219.9	1163.4	1125.0
12°	2146.0	2184.3	2188.4	2018.7	1608.7	1351.2	1195.7	1119.9	1079.5
13°	2087.4	2127.8	2178.3	2024.8	1600.6	1313.8	1165.4	1075.5	1026.0
14°	2017.7	2082.3	2162.1	2037.9	1580.4	1281.5	1135.1	1012.9	983.6
15°	1922.8	2014.7	2133.8	2043.0	1561.3	1259.3	1097.7	981.6	953.3
16°	1844.0	1948.0	2095.5	2043.0	1549.1	1229.0	1057.3	954.3	926.0
17°	1784.4	1869.3	2064.2	2044.0	1528.9	1207.8	1016.9	929.1	906.9
18°	1700.6	1795.5	2014.7	2039.9	1507.7	1182.6	982.6	907.9	880.6
19°	1607.7	1720.8	1962.2	2032.9	1489.6	1156.3	946.2	885.7	862.4
20°	1542.1	1646.1	1910.7	2021.8	1470.4	1139.1	927.1	860.4	839.2
21°	1432.0	1559.2	1859.2	2006.6	1450.2	1109.8	900.8	838.2	815.0
22.5°	1319.9	1437.0	1764.2	1981.4	1416.8	1073.5	871.5	810.9	776.6
23°	1276.5	1407.8	1735.0	1974.3	1405.7	1064.4	862.4	798.8	768.5
24°	1183.6	1319.9	1674.4	1952.1	1381.5	1034.1	845.3	774.6	753.4
25°	1060.4	1245.2	1617.8	1928.8	1361.3	1011.9	828.1	755.4	728.1
26°	921.0	1143.2	1566.3	1900.6	1333.0	981.6	804.9	737.2	698.8
27°	835.2	1055.3	1496.6	1870.3	1312.8	959.4	785.7	709.9	682.7
28°	766.5	917.0	1434.0	1841.0	1288.6	932.1	772.5	690.7	658.4
29°	691.8	841.2	1360.3	1801.6	1262.3	900.8	751.3	671.6	637.2
30°	648.3	760.4	1296.7	1772.3	1231.0	879.6	726.1	652.4	618.0
32.5°	569.6	627.1	1124.0	1688.5	1171.4	819.0	684.7	599.9	570.6
35°	528.2	558.5	903.8	1590.5	1103.8	768.5	637.2	556.4	530.2
37.5°	496.9	515.0	746.3	1485.5	1035.1	724.1	593.8	516.0	490.8
40°	465.5	479.7	618.0	1384.5	968.5	680.6	551.4	474.6	455.4
42.5°	437.3	448.4	536.2	1284.5	899.8	636.2	510.0	442.3	425.2
45°	406.0	416.1	488.8	1163.4	831.1	590.8	471.6	407.0	396.9
47.5°	379.7	386.8	443.3	1055.3	763.5	547.3	432.2	378.7	371.6
50°	351.4	360.5	405.0	935.1	701.9	504.9	398.9	353.5	347.4
52.5°	324.2	328.2	372.6	815.0	637.2	463.5	363.6	328.2	324.2
55°	287.8	304.0	334.3	691.8	572.6	425.2	327.2	302.0	298.9
57.5°	246.4	267.6	299.9	580.7	512.0	382.7	297.9	277.7	264.6
60°	197.9	223.2	265.6	482.7	458.5	344.4	267.6	236.3	220.2
62.5°	173.7	181.8	234.3	403.9	403.9	308.0	237.3	203.0	195.9
65°	151.5	157.5	201.0	334.3	351.4	267.6	210.1	175.7	169.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	132.3	137.3	153.5	278.7	303.0	233.3	173.7	153.5	146.4
70°	113.1	117.1	131.3	227.2	258.5	198.9	146.4	131.3	126.2
72.5°	95.9	100.0	108.1	170.7	212.1	165.6	123.2	112.1	108.1
75°	79.8	81.8	89.9	127.2	170.7	132.3	99.0	91.9	89.9
77.5°	64.6	65.6	70.7	90.9	132.3	101.0	79.8	73.7	72.7
80°	49.5	50.5	54.5	65.6	96.9	72.7	59.6	56.6	54.5
82.5°	35.3	36.4	38.4	44.4	65.6	49.5	42.4	41.4	38.4
85°	22.2	22.2	24.2	27.3	37.4	28.3	26.3	25.2	24.2
87.5°	10.1	10.1	11.1	11.1	17.2	12.1	12.1	11.1	10.1
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	18.51	19.97	18.87	20.29	20.60	21.20	22.67	21.57	22.98	23.30
	3H	19.62	20.94	20.00	21.26	21.63	22.64	23.96	23.02	24.28	24.65
	4H	20.07	21.30	20.47	21.65	22.03	23.14	24.38	23.54	24.72	25.10
	6H	20.41	21.54	20.82	21.91	22.30	23.47	24.61	23.88	24.97	25.37
	8H	20.52	21.60	20.95	21.99	22.40	23.56	24.64	23.99	25.03	25.43
	12H	20.60	21.63	21.03	22.01	22.44	23.61	24.64	24.04	25.02	25.45
4H	2H	19.68	20.91	20.08	21.26	21.64	21.65	22.89	22.06	23.23	23.61
	3H	20.90	21.92	21.31	22.32	22.72	23.31	24.33	23.72	24.73	25.13
	4H	21.38	22.30	21.82	22.72	23.16	23.95	24.87	24.38	25.28	25.72
	6H	21.78	22.58	22.24	23.02	23.48	24.41	25.20	24.86	25.65	26.11
	8H	21.92	22.66	22.38	23.11	23.58	24.53	25.28	25.00	25.72	26.19
	12H	22.02	22.68	22.50	23.16	23.63	24.61	25.28	25.10	25.76	26.23
8H	4H	21.78	22.53	22.25	22.97	23.44	24.06	24.81	24.53	25.25	25.72
	6H	22.28	22.89	22.77	23.38	23.86	24.63	25.24	25.12	25.73	26.21
	8H	22.47	23.01	22.98	23.53	24.02	24.82	25.37	25.34	25.89	26.37
	12H	22.62	23.11	23.13	23.60	24.17	24.97	25.46	25.48	25.95	26.52
12H	4H	21.83	22.49	22.31	22.97	23.45	24.05	24.72	24.54	25.19	25.67
	6H	22.34	22.90	22.86	23.41	23.90	24.62	25.17	25.14	25.68	26.17
	8H	22.59	23.07	23.10	23.56	24.13	24.87	25.35	25.38	25.85	26.41