

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: P735932

Luminaire Tested: S122RDRP-S675D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735932
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-S675D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

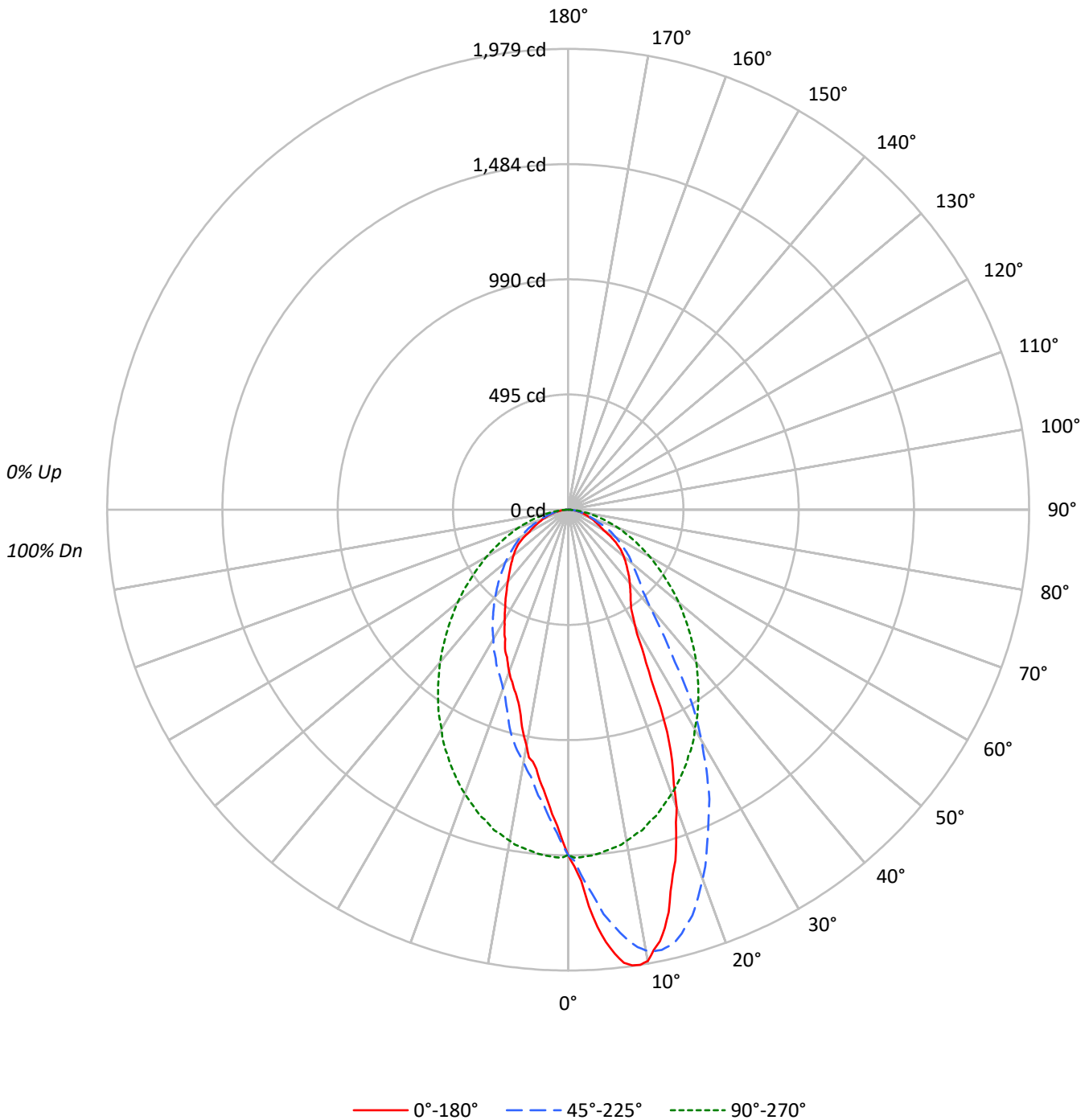
Lumens per Lamp: N/A
Luminaire Lumens: 2540.9 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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°	28503	28503	28503	28503	28503
5°	35960	33636	28612	24311	23279
10°	38411	37505	28178	21513	20101
15°	33785	37494	27433	19288	16751
20°	27851	34509	26557	16744	15157
25°	19857	30296	25492	15508	13635
30°	12707	25413	24126	14229	12112
35°	10944	18727	22869	13204	10984
40°	10315	13692	21458	12217	10092
45°	9745	11732	19950	11319	9525
50°	9279	10693	18531	10532	9171
55°	8515	9893	16943	9681	8844
60°	6720	9015	15562	9084	7473
65°	6085	8073	14113	8437	6813
70°	5614	6513	12830	7267	6266
75°	5228	5897	11192	6491	5897
80°	4837	5335	9475	5822	5335
85°	4323	4720	7278	5117	4720

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 27925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.8	5.7
10°-20°	386.4	15.2
20°-30°	484.7	19.1
30°-40°	461.9	18.2
40°-50°	407.5	16.0
50°-60°	320.5	12.6
60°-70°	204.5	8.0
70°-80°	104.0	4.1
80°-90°	27.6	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°	1015.0	39.9
0°-40°	1476.9	58.1
0°-60°	2204.9	86.8
0°-90°	2540.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2540.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1483	1483	1483	1483	1483	
5°	1864	1743	1483	1260	1206	181
15°	1698	1884	1379	969	842	470
25°	936	1428	1202	731	643	422
35°	466	798	975	563	468	297
45°	358	432	734	416	350	278
55°	254	295	506	289	264	223
65°	134	178	310	186	150	134
75°	70	79	151	87	79	75
85°	20	21	33	23	21	22
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°	1482.9	1482.9	1482.9	1482.9	1482.9	1482.9	1482.9	1482.9	1482.9
1°	1532.9	1540.0	1507.0	1510.6	1494.5	1466.0	1438.3	1441.0	1421.4
2°	1594.4	1613.1	1567.6	1540.0	1493.6	1443.7	1388.4	1381.3	1357.2
3°	1705.8	1696.9	1622.0	1565.8	1490.0	1415.1	1345.6	1329.5	1309.0
4°	1795.9	1769.2	1677.3	1598.8	1488.3	1382.2	1303.7	1276.0	1255.5
5°	1863.7	1829.8	1743.3	1623.8	1482.9	1363.4	1260.0	1228.8	1206.5
6°	1918.1	1892.2	1786.1	1647.0	1475.8	1335.8	1234.1	1192.2	1169.0
7°	1960.0	1938.6	1829.8	1678.2	1469.5	1308.1	1193.1	1149.4	1121.8
8°	1976.0	1966.2	1869.9	1700.5	1462.4	1288.5	1156.5	1117.3	1092.3
9°	1978.7	1979.6	1902.0	1721.9	1456.2	1252.9	1130.7	1090.6	1077.2
10°	1968.0	1976.0	1921.6	1746.0	1443.7	1235.0	1102.2	1063.8	1029.9
11°	1926.1	1961.8	1931.4	1762.0	1433.0	1206.5	1077.2	1027.3	993.4
12°	1894.9	1928.8	1932.3	1782.5	1420.5	1193.1	1055.8	988.9	953.2
13°	1843.2	1878.8	1923.4	1787.9	1413.4	1160.1	1029.0	949.7	906.0
14°	1781.6	1838.7	1909.2	1799.5	1395.5	1131.6	1002.3	894.4	868.5
15°	1697.8	1779.0	1884.2	1803.9	1378.6	1112.0	969.3	866.7	841.8
16°	1628.3	1720.1	1850.3	1803.9	1367.9	1085.2	933.6	842.7	817.7
17°	1575.7	1650.6	1822.7	1804.8	1350.1	1066.5	898.0	820.4	800.8
18°	1501.6	1585.5	1779.0	1801.3	1331.3	1044.2	867.6	801.6	777.6
19°	1419.6	1519.5	1732.6	1795.0	1315.3	1021.0	835.5	782.0	761.5
20°	1361.6	1453.5	1687.1	1785.2	1298.3	1005.8	818.6	759.7	741.0
21°	1264.4	1376.8	1641.6	1771.8	1280.5	980.0	795.4	740.1	719.6
22.5°	1165.5	1268.9	1557.8	1749.5	1251.1	947.9	769.5	716.0	685.7
23°	1127.1	1243.0	1532.0	1743.3	1241.3	939.9	761.5	705.3	678.6
24°	1045.1	1165.5	1478.5	1723.7	1219.9	913.1	746.4	683.9	665.2
25°	936.3	1099.5	1428.5	1703.2	1202.0	893.5	731.2	667.0	642.9
26°	813.2	1009.4	1383.0	1678.2	1177.1	866.7	710.7	650.9	617.1
27°	737.4	931.8	1321.5	1651.4	1159.2	847.1	693.8	626.9	602.8
28°	676.8	809.7	1266.2	1625.6	1137.8	823.0	682.2	609.9	581.4
29°	610.8	742.8	1201.1	1590.8	1114.6	795.4	663.4	593.0	562.7
30°	572.5	671.5	1145.0	1565.0	1087.0	776.7	641.1	576.0	545.7
32.5°	502.9	553.8	992.5	1490.9	1034.4	723.2	604.6	529.7	503.8
35°	466.4	493.1	798.1	1404.4	974.6	678.6	562.7	491.3	468.1
37.5°	438.7	454.8	659.0	1311.7	914.0	639.4	524.3	455.7	433.4
40°	411.1	423.6	545.7	1222.5	855.2	601.0	486.9	419.1	402.2
42.5°	386.1	395.9	473.5	1134.3	794.5	561.8	450.3	390.6	375.4
45°	358.5	367.4	431.6	1027.3	733.9	521.7	416.4	359.4	350.4
47.5°	335.3	341.5	391.5	931.8	674.1	483.3	381.7	334.4	328.1
50°	310.3	318.3	357.6	825.7	619.7	445.9	352.2	312.1	306.7
52.5°	286.2	289.8	329.0	719.6	562.7	409.3	321.0	289.8	286.2
55°	254.1	268.4	295.2	610.8	505.6	375.4	288.9	266.6	263.9
57.5°	217.6	236.3	264.8	512.7	452.1	338.0	263.1	245.2	233.6
60°	174.8	197.1	234.5	426.2	404.8	304.1	236.3	208.7	194.4
62.5°	153.4	160.5	206.9	356.7	356.7	272.0	209.6	179.2	173.0
65°	133.8	139.1	177.5	295.2	310.3	236.3	185.5	155.2	149.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	116.8	121.3	135.5	246.1	267.5	206.0	153.4	135.5	129.3
70°	99.9	103.4	115.9	200.6	228.3	175.7	129.3	115.9	111.5
72.5°	84.7	88.3	95.4	150.7	187.3	146.2	108.8	99.0	95.4
75°	70.4	72.2	79.4	112.4	150.7	116.8	87.4	81.1	79.4
77.5°	57.1	58.0	62.4	80.3	116.8	89.2	70.4	65.1	64.2
80°	43.7	44.6	48.2	58.0	85.6	64.2	52.6	49.9	48.2
82.5°	31.2	32.1	33.9	39.2	58.0	43.7	37.5	36.6	33.9
85°	19.6	19.6	21.4	24.1	33.0	25.0	23.2	22.3	21.4
87.5°	8.9	8.9	9.8	9.8	15.2	10.7	10.7	9.8	8.9
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	18.07	19.54	18.44	19.86	20.17	20.77	22.24	21.14	22.55	22.87
	3H	19.19	20.50	19.57	20.83	21.19	22.21	23.52	22.59	23.85	24.22
	4H	19.63	20.86	20.03	21.21	21.59	22.71	23.94	23.11	24.29	24.67
	6H	19.98	21.11	20.39	21.48	21.87	23.04	24.18	23.45	24.54	24.94
	8H	20.09	21.17	20.52	21.56	21.96	23.13	24.21	23.56	24.60	25.00
	12H	20.17	21.20	20.60	21.58	22.01	23.18	24.21	23.61	24.59	25.02
4H	2H	19.24	20.47	19.64	20.82	21.20	21.22	22.45	21.62	22.80	23.18
	3H	20.47	21.49	20.88	21.89	22.29	22.88	23.90	23.29	24.30	24.70
	4H	20.95	21.87	21.38	22.28	22.72	23.52	24.44	23.95	24.85	25.29
	6H	21.35	22.15	21.81	22.59	23.05	23.97	24.77	24.43	25.21	25.67
	8H	21.49	22.23	21.95	22.68	23.14	24.10	24.85	24.57	25.29	25.76
	12H	21.59	22.25	22.07	22.73	23.20	24.18	24.84	24.67	25.32	25.80
8H	4H	21.35	22.10	21.82	22.54	23.01	23.63	24.38	24.10	24.82	25.29
	6H	21.84	22.46	22.34	22.95	23.43	24.19	24.81	24.69	25.30	25.78
	8H	22.03	22.58	22.55	23.09	23.58	24.39	24.94	24.91	25.45	25.94
	12H	22.19	22.68	22.70	23.17	23.74	24.54	25.03	25.05	25.52	26.09
12H	4H	21.40	22.06	21.88	22.54	23.01	23.62	24.28	24.10	24.76	25.23
	6H	21.91	22.46	22.43	22.97	23.46	24.19	24.74	24.71	25.25	25.74
	8H	22.16	22.64	22.67	23.13	23.70	24.44	24.92	24.95	25.41	25.98