

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: P735934

Luminaire Tested: S122RDR-S865D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735934
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-S865D830-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3451.3 lumens
Efficiency: N/A
Efficacy: 98.6 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

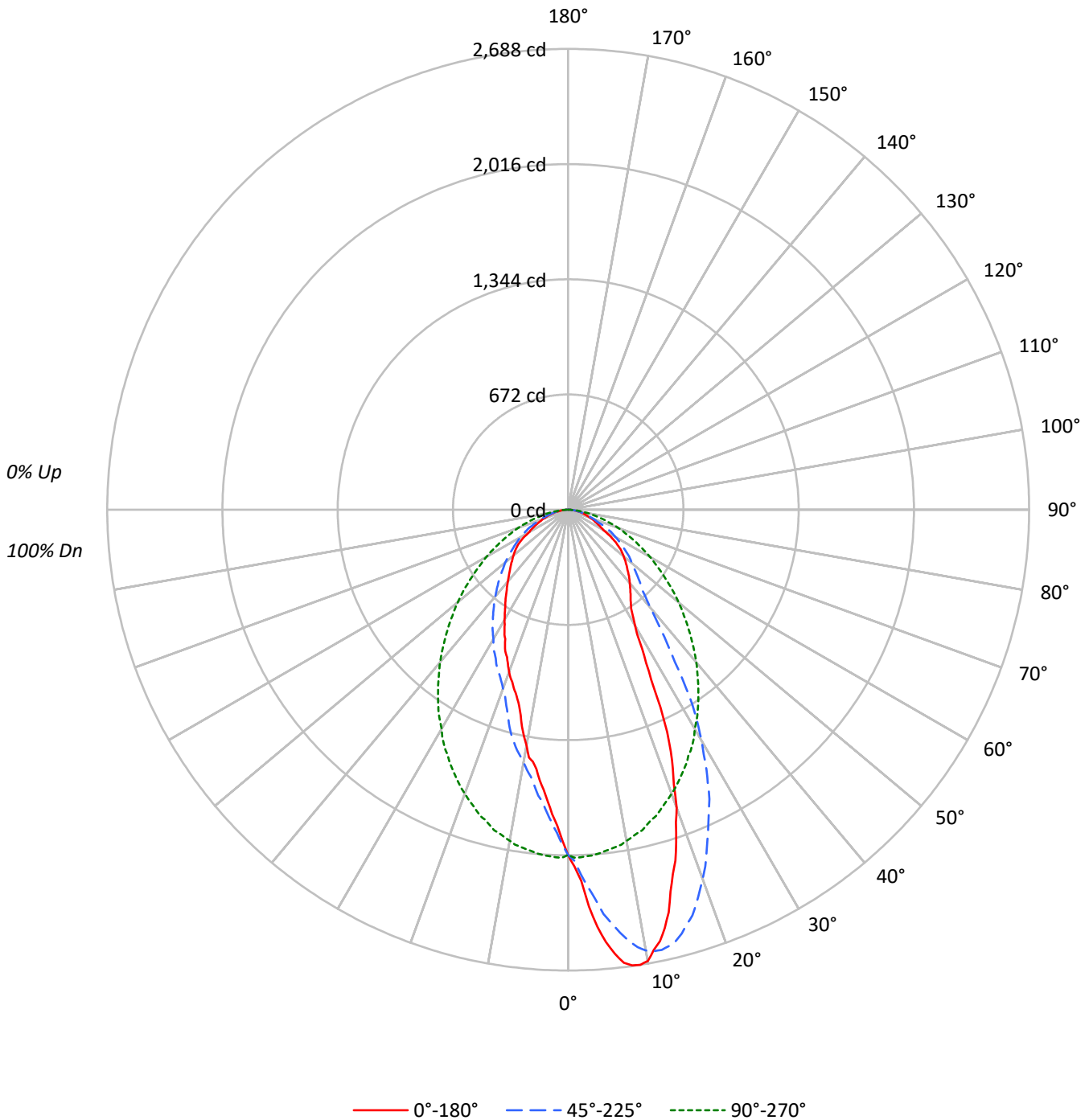
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	38717	38717	38717	38717	38717
5°	48845	45688	38865	33023	31620
10°	52175	50945	38274	29220	27305
15°	45892	50928	37261	26199	22753
20°	37831	46874	36072	22744	20588
25°	26973	41153	34627	21064	18521
30°	17259	34517	32771	19329	16453
35°	14865	25436	31065	17934	14921
40°	14011	18600	29146	16593	13708
45°	13235	15935	27096	15375	12939
50°	12604	14524	25172	14306	12461
55°	11568	13435	23016	13150	12014
60°	9126	12248	21140	12340	10149
65°	8264	10961	19170	11457	9255
70°	7626	8851	17427	9869	8509
75°	7107	8006	15202	8815	8006
80°	6564	7239	12873	7914	7239
85°	5866	6418	9880	6947	6418

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 37928 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.3	5.7
10°-20°	524.9	15.2
20°-30°	658.4	19.1
30°-40°	627.4	18.2
40°-50°	553.5	16.0
50°-60°	435.4	12.6
60°-70°	277.8	8.0
70°-80°	141.2	4.1
80°-90°	37.4	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°	1378.7	39.9
0°-40°	2006.1	58.1
0°-60°	2994.9	86.8
0°-90°	3451.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3451.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2014	2014	2014	2014	2014	
5°	2532	2368	2014	1712	1639	246
15°	2306	2559	1872	1317	1143	639
25°	1272	1940	1633	993	873	573
35°	634	1084	1324	764	636	403
45°	487	586	997	566	476	377
55°	345	401	687	392	358	303
65°	182	241	422	252	204	182
75°	96	108	205	119	108	102
85°	27	29	45	32	29	30
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°	2014.3	2014.3	2014.3	2014.3	2014.3	2014.3	2014.3	2014.3	2014.3
1°	2082.1	2091.8	2047.0	2051.8	2030.0	1991.2	1953.7	1957.3	1930.7
2°	2165.7	2191.1	2129.3	2091.8	2028.8	1961.0	1885.9	1876.2	1843.5
3°	2317.1	2305.0	2203.2	2126.9	2024.0	1922.2	1827.7	1805.9	1778.1
4°	2439.4	2403.1	2278.3	2171.7	2021.5	1877.4	1770.8	1733.3	1705.4
5°	2531.5	2485.4	2367.9	2205.6	2014.3	1852.0	1711.5	1669.1	1638.8
6°	2605.3	2570.2	2426.1	2237.1	2004.6	1814.4	1676.3	1619.4	1587.9
7°	2662.3	2633.2	2485.4	2279.5	1996.1	1776.9	1620.6	1561.3	1523.7
8°	2684.1	2670.7	2539.9	2309.8	1986.4	1750.2	1571.0	1517.7	1483.7
9°	2687.7	2688.9	2583.5	2338.9	1977.9	1701.8	1535.8	1481.3	1463.2
10°	2673.2	2684.1	2610.2	2371.6	1961.0	1677.5	1497.1	1445.0	1399.0
11°	2616.2	2664.7	2623.5	2393.4	1946.4	1638.8	1463.2	1395.3	1349.3
12°	2573.8	2619.9	2624.7	2421.2	1929.5	1620.6	1434.1	1343.2	1294.8
13°	2503.6	2552.0	2612.6	2428.5	1919.8	1575.8	1397.7	1290.0	1230.6
14°	2420.0	2497.5	2593.2	2444.2	1895.6	1537.0	1361.4	1214.9	1179.7
15°	2306.2	2416.4	2559.3	2450.3	1872.5	1510.4	1316.6	1177.3	1143.4
16°	2211.7	2336.4	2513.3	2450.3	1858.0	1474.1	1268.1	1144.6	1110.7
17°	2140.2	2242.0	2475.7	2451.5	1833.8	1448.6	1219.7	1114.3	1087.7
18°	2039.7	2153.6	2416.4	2446.7	1808.4	1418.3	1178.5	1088.9	1056.2
19°	1928.3	2063.9	2353.4	2438.2	1786.6	1386.8	1134.9	1062.2	1034.4
20°	1849.5	1974.3	2291.6	2424.9	1763.5	1366.3	1111.9	1032.0	1006.5
21°	1717.5	1870.1	2229.9	2406.7	1739.3	1331.1	1080.4	1005.3	977.5
22.5°	1583.1	1723.6	2116.0	2376.4	1699.3	1287.5	1045.3	972.6	931.4
23°	1531.0	1688.4	2080.9	2367.9	1686.0	1276.6	1034.4	958.1	921.7
24°	1419.6	1583.1	2008.2	2341.3	1657.0	1240.3	1013.8	929.0	903.6
25°	1271.8	1493.4	1940.4	2313.4	1632.7	1213.6	993.2	906.0	873.3
26°	1104.6	1371.1	1878.6	2279.5	1598.8	1177.3	965.3	884.2	838.2
27°	1001.7	1265.7	1795.0	2243.2	1574.6	1150.7	942.3	851.5	818.8
28°	919.3	1099.8	1719.9	2208.1	1545.5	1118.0	926.6	828.5	789.7
29°	829.7	1008.9	1631.5	2160.8	1514.0	1080.4	901.1	805.5	764.3
30°	777.6	912.0	1555.2	2125.7	1476.5	1055.0	870.9	782.4	741.3
32.5°	683.1	752.2	1348.1	2025.2	1405.0	982.3	821.2	719.5	684.3
35°	633.5	669.8	1084.0	1907.7	1323.9	921.7	764.3	667.4	635.9
37.5°	595.9	617.7	895.1	1781.7	1241.5	868.4	712.2	618.9	588.7
40°	558.4	575.3	741.3	1660.6	1161.6	816.4	661.3	569.3	546.3
42.5°	524.5	537.8	643.2	1540.7	1079.2	763.1	611.7	530.5	509.9
45°	486.9	499.0	586.2	1395.3	996.8	708.6	565.6	488.1	476.0
47.5°	455.4	463.9	531.7	1265.7	915.7	656.5	518.4	454.2	445.7
50°	421.5	432.4	485.7	1121.6	841.8	605.6	478.4	423.9	416.7
52.5°	388.8	393.6	446.9	977.5	764.3	556.0	436.0	393.6	388.8
55°	345.2	364.6	400.9	829.7	686.8	509.9	392.4	362.2	358.5
57.5°	295.5	321.0	359.7	696.5	614.1	459.1	357.3	333.1	317.3
60°	237.4	267.7	318.6	579.0	549.9	413.0	321.0	283.4	264.0
62.5°	208.3	218.0	281.0	484.5	484.5	369.4	284.6	243.5	235.0
65°	181.7	189.0	241.0	400.9	421.5	321.0	251.9	210.8	203.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	158.7	164.7	184.1	334.3	363.4	279.8	208.3	184.1	175.6
70°	135.7	140.5	157.5	272.5	310.1	238.6	175.6	157.5	151.4
72.5°	115.1	119.9	129.6	204.7	254.4	198.6	147.8	134.4	129.6
75°	95.7	98.1	107.8	152.6	204.7	158.7	118.7	110.2	107.8
77.5°	77.5	78.7	84.8	109.0	158.7	121.1	95.7	88.4	87.2
80°	59.3	60.6	65.4	78.7	116.3	87.2	71.5	67.8	65.4
82.5°	42.4	43.6	46.0	53.3	78.7	59.3	50.9	49.7	46.0
85°	26.6	26.6	29.1	32.7	44.8	33.9	31.5	30.3	29.1
87.5°	12.1	12.1	13.3	13.3	20.6	14.5	14.5	13.3	12.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)