

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: P735934

Luminaire Tested: S122RDRP-S865D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122RDRP-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

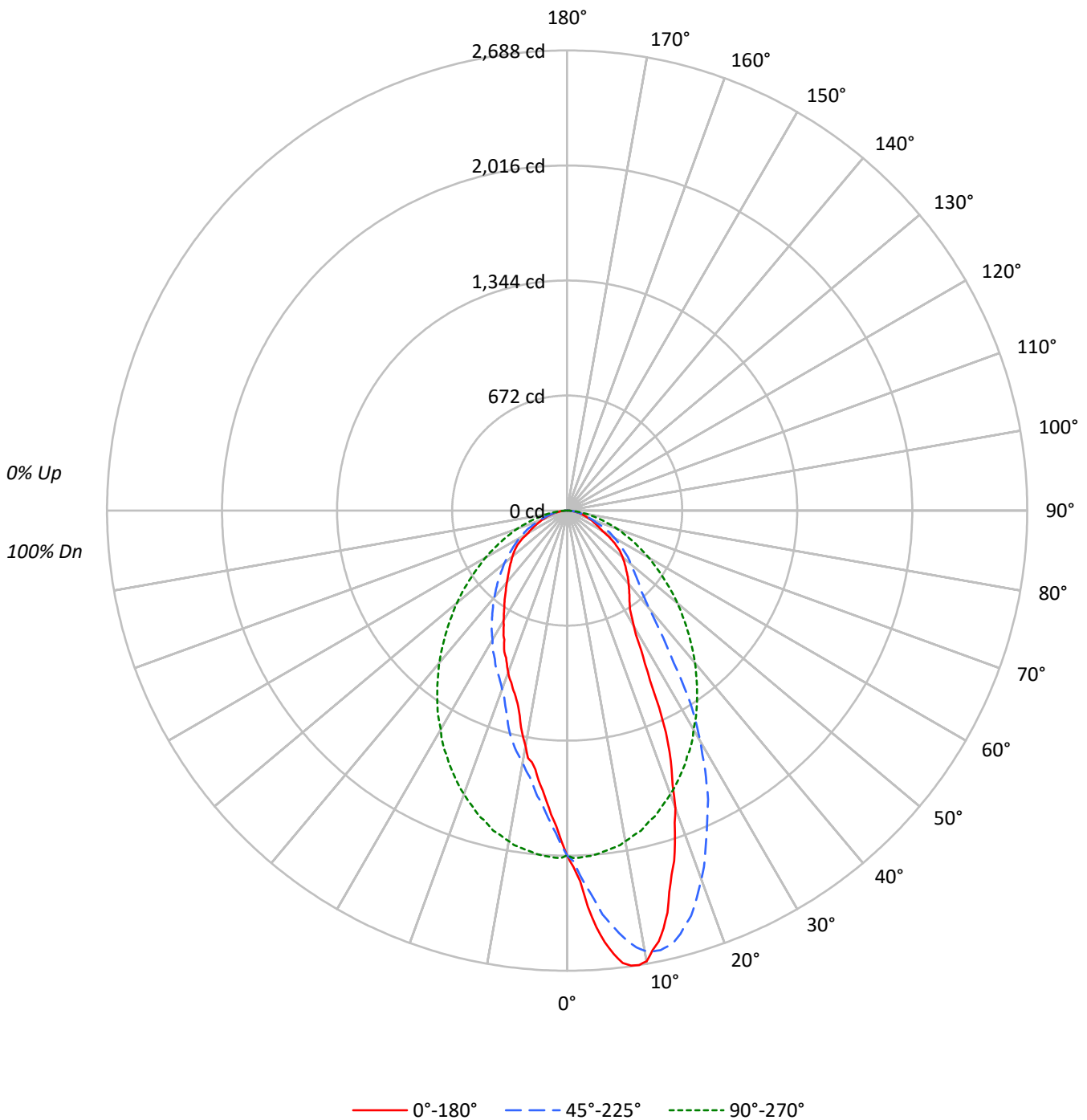
Lumens per Lamp: N/A
Luminaire Lumens: 3451.3 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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	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°	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



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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	19.14	20.61	19.50	20.92	21.23	21.83	23.30	22.20	23.62	23.93
	3H	20.25	21.57	20.63	21.90	22.26	23.27	24.59	23.65	24.92	25.28
	4H	20.70	21.93	21.10	22.28	22.66	23.78	25.01	24.18	25.36	25.74
	6H	21.04	22.18	21.45	22.54	22.94	24.10	25.24	24.52	25.61	26.00
	8H	21.15	22.24	21.58	22.63	23.03	24.19	25.27	24.62	25.66	26.07
	12H	21.23	22.26	21.66	22.65	23.08	24.24	25.27	24.67	25.66	26.09
4H	2H	20.31	21.54	20.71	21.89	22.27	22.29	23.52	22.69	23.87	24.25
	3H	21.53	22.55	21.95	22.95	23.36	23.94	24.96	24.35	25.36	25.77
	4H	22.01	22.93	22.45	23.35	23.79	24.58	25.50	25.02	25.92	26.36
	6H	22.42	23.21	22.87	23.66	24.12	25.04	25.83	25.50	26.28	26.74
	8H	22.55	23.29	23.02	23.74	24.21	25.17	25.91	25.63	26.35	26.82
	12H	22.65	23.31	23.13	23.79	24.26	25.25	25.91	25.73	26.39	26.86
8H	4H	22.42	23.16	22.88	23.60	24.07	24.70	25.44	25.16	25.88	26.35
	6H	22.91	23.52	23.41	24.01	24.49	25.26	25.87	25.76	26.36	26.84
	8H	23.10	23.65	23.61	24.16	24.65	25.46	26.01	25.97	26.52	27.01
	12H	23.25	23.74	23.77	24.23	24.80	25.60	26.09	26.12	26.58	27.15
12H	4H	22.46	23.13	22.95	23.61	24.08	24.68	25.35	25.17	25.83	26.30
	6H	22.98	23.53	23.49	24.04	24.53	25.25	25.80	25.77	26.32	26.80
	8H	23.22	23.70	23.73	24.20	24.76	25.50	25.99	26.01	26.48	27.04