

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: P735942

Luminaire Tested: S122RDRP-S865D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735942
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-S865D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

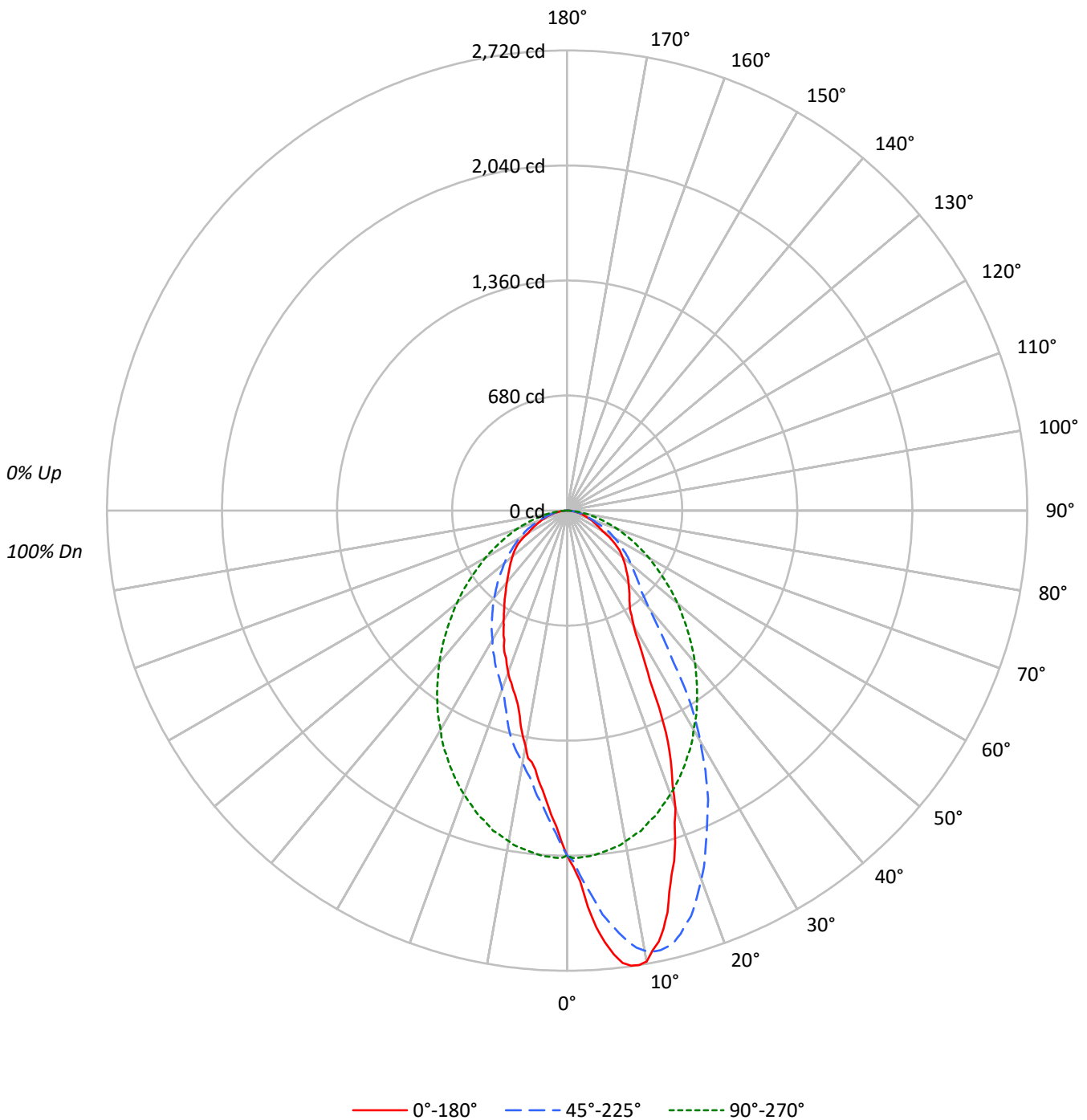
Lumens per Lamp: N/A
Luminaire Lumens: 3493.3 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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°	39186	39186	39186	39186	39186
5°	49437	46244	39336	33424	32004
10°	52809	51564	38739	29575	27637
15°	46449	51547	37715	26518	23029
20°	38291	47445	36512	23020	20839
25°	27299	41653	35049	21321	18746
30°	17470	34937	33168	19565	16653
35°	15046	25746	31443	18152	15102
40°	14182	18826	29500	16796	13873
45°	13396	16130	27428	15562	13097
50°	12757	14700	25477	14479	12610
55°	11709	13599	23294	13311	12161
60°	9238	12394	21397	12490	10276
65°	8364	11097	19402	11598	9369
70°	7716	8958	17635	9992	8610
75°	7189	8102	15388	8919	8102
80°	6653	7328	13028	8003	7328
85°	5955	6484	10012	7035	6484

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 38391 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.7	5.7
10°-20°	531.3	15.2
20°-30°	666.4	19.1
30°-40°	635.0	18.2
40°-50°	560.2	16.0
50°-60°	440.6	12.6
60°-70°	281.2	8.0
70°-80°	142.9	4.1
80°-90°	37.9	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°	1395.5	39.9
0°-40°	2030.4	58.1
0°-60°	3031.3	86.8
0°-90°	3493.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3493.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2039	2039	2039	2039	2039	
5°	2562	2397	2039	1732	1659	249
15°	2334	2590	1895	1333	1157	647
25°	1287	1964	1653	1005	884	580
35°	641	1097	1340	774	644	408
45°	493	593	1009	572	482	382
55°	349	406	695	397	363	307
65°	184	244	427	255	206	184
75°	97	109	207	120	109	103
85°	27	29	45	32	29	31
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°	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7
1°	2107.4	2117.2	2071.8	2076.8	2054.7	2015.5	1977.4	1981.1	1954.2
2°	2192.0	2217.7	2155.2	2117.2	2053.5	1984.8	1908.8	1899.0	1865.9
3°	2345.2	2333.0	2230.0	2152.8	2048.6	1945.6	1850.0	1827.9	1799.7
4°	2469.1	2432.3	2306.0	2198.1	2046.1	1900.2	1792.3	1754.3	1726.1
5°	2562.2	2515.6	2396.7	2232.4	2038.7	1874.5	1732.3	1689.4	1658.7
6°	2637.0	2601.5	2455.6	2264.3	2028.9	1836.5	1696.7	1639.1	1607.2
7°	2694.6	2665.2	2515.6	2307.2	2020.4	1798.5	1640.3	1580.2	1542.2
8°	2716.7	2703.2	2570.8	2337.9	2010.5	1771.5	1590.1	1536.1	1501.8
9°	2720.4	2721.6	2614.9	2367.3	2002.0	1722.5	1554.5	1499.3	1480.9
10°	2705.7	2716.7	2641.9	2400.4	1984.8	1697.9	1515.3	1462.6	1416.0
11°	2648.0	2697.1	2655.4	2422.5	1970.1	1658.7	1480.9	1412.3	1365.7
12°	2605.1	2651.7	2656.6	2450.7	1952.9	1640.3	1451.5	1359.6	1310.5
13°	2534.0	2583.1	2644.4	2458.0	1943.1	1595.0	1414.7	1305.6	1245.6
14°	2449.4	2527.9	2624.7	2474.0	1918.6	1555.7	1378.0	1229.6	1194.1
15°	2334.2	2445.8	2590.4	2480.1	1895.3	1528.8	1332.6	1191.6	1157.3
16°	2238.6	2364.8	2543.8	2480.1	1880.6	1492.0	1283.6	1158.5	1124.2
17°	2166.2	2269.2	2505.8	2481.3	1856.1	1466.2	1234.5	1127.9	1100.9
18°	2064.5	2179.7	2445.8	2476.4	1830.3	1435.6	1192.8	1102.1	1069.0
19°	1951.7	2089.0	2382.0	2467.8	1808.3	1403.7	1148.7	1075.2	1047.0
20°	1872.0	1998.3	2319.5	2454.3	1785.0	1382.9	1125.4	1044.5	1018.8
21°	1738.4	1892.9	2257.0	2436.0	1760.5	1347.3	1093.5	1017.5	989.3
22.5°	1602.3	1744.5	2141.7	2405.3	1720.0	1303.2	1058.0	984.4	942.8
23°	1549.6	1709.0	2106.2	2396.7	1706.5	1292.1	1047.0	969.7	932.9
24°	1436.8	1602.3	2032.6	2369.8	1677.1	1255.4	1026.1	940.3	914.6
25°	1287.2	1511.6	1964.0	2341.6	1652.6	1228.4	1005.3	917.0	883.9
26°	1118.1	1387.8	1901.4	2307.2	1618.2	1191.6	977.1	894.9	848.4
27°	1013.9	1281.1	1816.9	2270.5	1593.7	1164.6	953.8	861.8	828.7
28°	930.5	1113.2	1740.8	2234.9	1564.3	1131.5	937.8	838.5	799.3
29°	839.8	1021.2	1651.3	2187.1	1532.4	1093.5	912.1	815.3	773.6
30°	787.1	923.1	1574.1	2151.5	1494.4	1067.8	881.5	792.0	750.3
32.5°	691.4	761.3	1364.5	2049.8	1422.1	994.2	831.2	728.2	692.7
35°	641.2	677.9	1097.2	1930.9	1340.0	932.9	773.6	675.5	643.6
37.5°	603.2	625.2	906.0	1803.4	1256.6	879.0	720.9	626.5	595.8
40°	565.2	582.3	750.3	1680.8	1175.7	826.3	669.4	576.2	552.9
42.5°	530.8	544.3	651.0	1559.4	1092.3	772.3	619.1	537.0	516.1
45°	492.8	505.1	593.4	1412.3	1009.0	717.2	572.5	494.1	481.8
47.5°	461.0	469.5	538.2	1281.1	926.8	664.5	524.7	459.7	451.1
50°	426.6	437.7	491.6	1135.2	852.0	613.0	484.2	429.1	421.7
52.5°	393.5	398.4	452.4	989.3	773.6	562.7	441.3	398.4	393.5
55°	349.4	369.0	405.8	839.8	695.1	516.1	397.2	366.6	362.9
57.5°	299.1	324.9	364.1	704.9	621.6	464.6	361.7	337.1	321.2
60°	240.3	270.9	322.4	586.0	556.6	418.0	324.9	286.9	267.3
62.5°	210.9	220.7	284.4	490.4	490.4	373.9	288.1	246.4	237.8
65°	183.9	191.2	244.0	405.8	426.6	324.9	255.0	213.3	206.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	160.6	166.7	186.3	338.4	367.8	283.2	210.9	186.3	177.8
70°	137.3	142.2	159.4	275.8	313.8	241.5	177.8	159.4	153.2
72.5°	116.5	121.4	131.2	207.2	257.4	201.1	149.6	136.1	131.2
75°	96.8	99.3	109.1	154.5	207.2	160.6	120.1	111.6	109.1
77.5°	78.5	79.7	85.8	110.3	160.6	122.6	96.8	89.5	88.3
80°	60.1	61.3	66.2	79.7	117.7	88.3	72.3	68.7	66.2
82.5°	42.9	44.1	46.6	53.9	79.7	60.1	51.5	50.3	46.6
85°	27.0	27.0	29.4	33.1	45.4	34.3	31.9	30.6	29.4
87.5°	12.3	12.3	13.5	13.5	20.8	14.7	14.7	13.5	12.3
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	19.18	20.65	19.55	20.96	21.28	21.88	23.34	22.24	23.66	23.97
	3H	20.30	21.61	20.67	21.94	22.30	23.32	24.63	23.69	24.96	25.32
	4H	20.74	21.97	21.14	22.32	22.70	23.82	25.05	24.22	25.40	25.78
	6H	21.08	22.22	21.50	22.59	22.98	24.15	25.28	24.56	25.65	26.04
	8H	21.20	22.28	21.62	22.67	23.07	24.23	25.32	24.66	25.71	26.11
	12H	21.27	22.31	21.70	22.69	23.12	24.28	25.32	24.71	25.70	26.13
4H	2H	20.35	21.58	20.75	21.93	22.31	22.33	23.56	22.73	23.91	24.29
	3H	21.58	22.60	21.99	23.00	23.40	23.99	25.01	24.40	25.41	25.81
	4H	22.06	22.97	22.49	23.39	23.83	24.62	25.54	25.06	25.96	26.40
	6H	22.46	23.25	22.92	23.70	24.16	25.08	25.88	25.54	26.32	26.78
	8H	22.59	23.34	23.06	23.78	24.25	25.21	25.95	25.67	26.40	26.86
	12H	22.69	23.35	23.18	23.83	24.31	25.29	25.95	25.77	26.43	26.90
8H	4H	22.46	23.20	22.92	23.65	24.11	24.74	25.48	25.20	25.93	26.39
	6H	22.95	23.56	23.45	24.05	24.53	25.30	25.91	25.80	26.40	26.88
	8H	23.14	23.69	23.65	24.20	24.69	25.50	26.05	26.01	26.56	27.05
	12H	23.30	23.78	23.81	24.27	24.84	25.65	26.13	26.16	26.62	27.19
12H	4H	22.51	23.17	22.99	23.65	24.12	24.73	25.39	25.21	25.87	26.34
	6H	23.02	23.57	23.53	24.08	24.57	25.30	25.85	25.81	26.36	26.85
	8H	23.26	23.75	23.77	24.24	24.81	25.54	26.03	26.05	26.52	27.09