

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: P735928

Luminaire Tested: S122RDRP-S675D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735928
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-S675D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

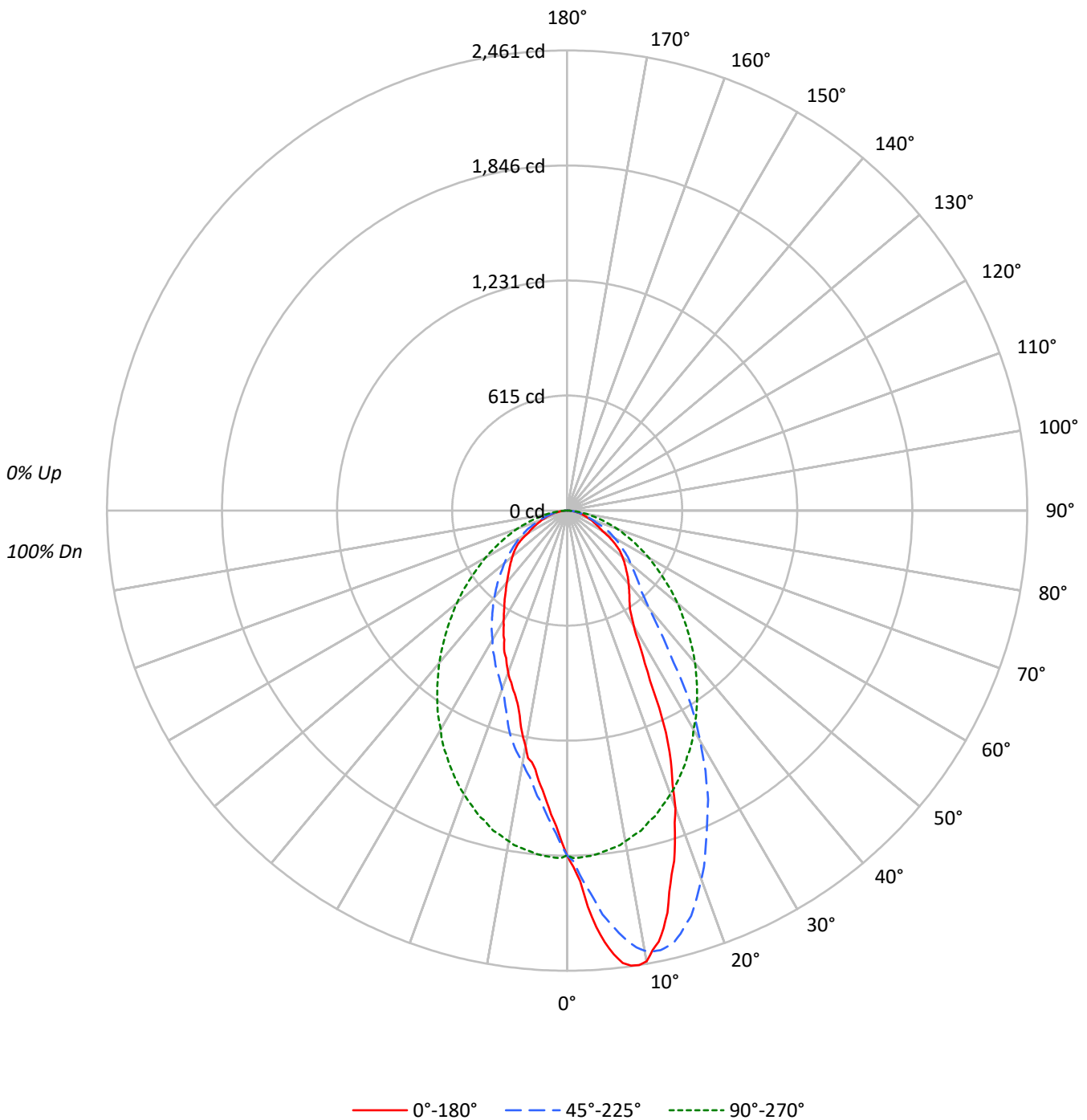
Lumens per Lamp: N/A
Luminaire Lumens: 3160.1 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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	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°	35450	35450	35450	35450	35450
5°	44721	41833	35585	30235	28952
10°	47772	46646	35044	26753	25000
15°	42017	46630	34117	23989	20833
20°	34638	42918	33028	20825	18851
25°	24697	37679	31704	19287	16958
30°	15803	31605	30005	17698	15064
35°	13610	23291	28442	16421	13661
40°	12827	17030	26685	15193	12551
45°	12118	14592	24810	14078	11846
50°	11540	13298	23049	13101	11408
55°	10593	12302	21072	12041	11002
60°	8357	11214	19356	11298	9295
65°	7568	10038	17551	10493	8473
70°	6980	8104	15955	9037	7789
75°	6506	7330	13917	8073	7330
80°	6011	6630	11789	7239	6630
85°	5381	5866	9042	6352	5866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 34729 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.9	5.7
10°-20°	480.6	15.2
20°-30°	602.9	19.1
30°-40°	574.4	18.2
40°-50°	506.8	16.0
50°-60°	398.6	12.6
60°-70°	254.4	8.0
70°-80°	129.3	4.1
80°-90°	34.3	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°	1262.3	39.9
0°-40°	1836.8	58.1
0°-60°	2742.1	86.8
0°-90°	3160.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3160.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1844	1844	1844	1844	1844	
5°	2318	2168	1844	1567	1500	225
15°	2112	2343	1714	1206	1047	585
25°	1164	1777	1495	909	800	525
35°	580	993	1212	700	582	369
45°	446	537	913	518	436	346
55°	316	367	629	359	328	278
65°	166	221	386	231	186	166
75°	88	99	187	109	99	93
85°	24	27	41	29	27	28
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°	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3
1°	1906.4	1915.2	1874.2	1878.6	1858.7	1823.2	1788.8	1792.1	1767.7
2°	1982.9	2006.2	1949.6	1915.2	1857.6	1795.5	1726.7	1717.8	1687.9
3°	2121.5	2110.4	2017.3	1947.4	1853.1	1760.0	1673.5	1653.5	1628.0
4°	2233.5	2200.3	2086.0	1988.4	1850.9	1719.0	1621.4	1587.0	1561.5
5°	2317.8	2275.7	2168.1	2019.5	1844.3	1695.7	1567.0	1528.2	1500.5
6°	2385.5	2353.3	2221.3	2048.3	1835.4	1661.3	1534.9	1482.7	1453.9
7°	2437.6	2411.0	2275.7	2087.1	1827.6	1626.9	1483.8	1429.5	1395.1
8°	2457.5	2445.3	2325.6	2114.9	1818.8	1602.5	1438.4	1389.6	1358.5
9°	2460.9	2462.0	2365.5	2141.5	1811.0	1558.1	1406.2	1356.3	1339.7
10°	2447.6	2457.5	2389.9	2171.4	1795.5	1536.0	1370.7	1323.0	1280.9
11°	2395.4	2439.8	2402.1	2191.4	1782.2	1500.5	1339.7	1277.6	1235.4
12°	2356.6	2398.8	2403.2	2216.9	1766.6	1483.8	1313.1	1229.9	1185.5
13°	2292.3	2336.7	2392.1	2223.5	1757.8	1442.8	1279.8	1181.1	1126.7
14°	2215.8	2286.8	2374.4	2238.0	1735.6	1407.3	1246.5	1112.3	1080.2
15°	2111.5	2212.5	2343.3	2243.5	1714.5	1382.9	1205.5	1077.9	1046.9
16°	2025.0	2139.3	2301.2	2243.5	1701.2	1349.7	1161.1	1048.0	1017.0
17°	1959.6	2052.8	2266.8	2244.6	1679.0	1326.4	1116.8	1020.3	995.9
18°	1867.6	1971.8	2212.5	2240.2	1655.7	1298.6	1079.1	997.0	967.0
19°	1765.5	1889.7	2154.8	2232.4	1635.8	1269.8	1039.1	972.6	947.1
20°	1693.4	1807.7	2098.2	2220.2	1614.7	1251.0	1018.1	944.9	921.6
21°	1572.6	1712.3	2041.7	2203.6	1592.5	1218.8	989.2	920.5	895.0
22.5°	1449.5	1578.1	1937.4	2175.9	1555.9	1178.9	957.1	890.5	852.8
23°	1401.8	1545.9	1905.3	2168.1	1543.7	1168.9	947.1	877.2	843.9
24°	1299.7	1449.5	1838.7	2143.7	1517.1	1135.6	928.2	850.6	827.3
25°	1164.5	1367.4	1776.6	2118.2	1494.9	1111.2	909.4	829.5	799.6
26°	1011.4	1255.4	1720.1	2087.1	1463.9	1077.9	883.9	809.6	767.4
27°	917.1	1158.9	1643.5	2053.9	1441.7	1053.6	862.8	779.6	749.7
28°	841.7	1007.0	1574.8	2021.7	1415.1	1023.6	848.4	758.6	723.1
29°	759.7	923.8	1493.8	1978.5	1386.3	989.2	825.1	737.5	699.8
30°	712.0	835.1	1424.0	1946.3	1351.9	965.9	797.4	716.4	678.7
32.5°	625.5	688.7	1234.3	1854.2	1286.4	899.4	751.9	658.7	626.6
35°	580.0	613.3	992.6	1746.7	1212.1	843.9	699.8	611.1	582.2
37.5°	545.6	565.6	819.6	1631.3	1136.7	795.2	652.1	566.7	539.0
40°	511.2	526.8	678.7	1520.4	1063.5	747.5	605.5	521.2	500.2
42.5°	480.2	492.4	588.9	1410.6	988.1	698.7	560.0	485.7	466.9
45°	445.8	456.9	536.8	1277.6	912.7	648.8	517.9	446.9	435.8
47.5°	417.0	424.7	486.9	1158.9	838.4	601.1	474.7	415.9	408.1
50°	385.9	395.9	444.7	1026.9	770.8	554.5	438.1	388.2	381.5
52.5°	356.0	360.4	409.2	895.0	699.8	509.0	399.2	360.4	356.0
55°	316.1	333.8	367.1	759.7	628.8	466.9	359.3	331.6	328.3
57.5°	270.6	293.9	329.4	637.7	562.3	420.3	327.2	305.0	290.6
60°	217.4	245.1	291.7	530.1	503.5	378.2	293.9	259.5	241.8
62.5°	190.7	199.6	257.3	443.6	443.6	338.2	260.6	222.9	215.1
65°	166.4	173.0	220.7	367.1	385.9	293.9	230.7	193.0	186.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	145.3	150.8	168.6	306.1	332.7	256.2	190.7	168.6	160.8
70°	124.2	128.6	144.2	249.5	283.9	218.5	160.8	144.2	138.6
72.5°	105.4	109.8	118.7	187.4	232.9	181.9	135.3	123.1	118.7
75°	87.6	89.8	98.7	139.7	187.4	145.3	108.7	100.9	98.7
77.5°	71.0	72.1	77.6	99.8	145.3	110.9	87.6	81.0	79.8
80°	54.3	55.5	59.9	72.1	106.5	79.8	65.4	62.1	59.9
82.5°	38.8	39.9	42.1	48.8	72.1	54.3	46.6	45.5	42.1
85°	24.4	24.4	26.6	29.9	41.0	31.1	28.8	27.7	26.6
87.5°	11.1	11.1	12.2	12.2	18.9	13.3	13.3	12.2	11.1
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	18.83	20.30	19.20	20.61	20.93	21.53	23.00	21.89	23.31	23.62
	3H	19.95	21.26	20.33	21.59	21.95	22.97	24.28	23.35	24.61	24.97
	4H	20.39	21.62	20.79	21.97	22.35	23.47	24.70	23.87	25.05	25.43
	6H	20.73	21.87	21.15	22.24	22.63	23.80	24.93	24.21	25.30	25.69
	8H	20.85	21.93	21.28	22.32	22.72	23.89	24.97	24.31	25.36	25.76
	12H	20.92	21.96	21.35	22.34	22.77	23.93	24.97	24.36	25.35	25.78
4H	2H	20.00	21.23	20.40	21.58	21.96	21.98	23.21	22.38	23.56	23.94
	3H	21.23	22.25	21.64	22.65	23.05	23.64	24.66	24.05	25.06	25.46
	4H	21.71	22.62	22.14	23.04	23.48	24.28	25.19	24.71	25.61	26.05
	6H	22.11	22.91	22.57	23.35	23.81	24.73	25.53	25.19	25.97	26.43
	8H	22.24	22.99	22.71	23.43	23.90	24.86	25.60	25.32	26.05	26.52
	12H	22.34	23.01	22.83	23.49	23.96	24.94	25.60	25.42	26.08	26.55
8H	4H	22.11	22.85	22.57	23.30	23.77	24.39	25.13	24.85	25.58	26.05
	6H	22.60	23.21	23.10	23.71	24.18	24.95	25.56	25.45	26.06	26.53
	8H	22.79	23.34	23.31	23.85	24.34	25.15	25.70	25.67	26.21	26.70
	12H	22.95	23.43	23.46	23.93	24.49	25.30	25.78	25.81	26.28	26.84
12H	4H	22.16	22.82	22.64	23.30	23.77	24.38	25.04	24.86	25.52	25.99
	6H	22.67	23.22	23.19	23.73	24.22	24.95	25.50	25.46	26.01	26.50
	8H	22.91	23.40	23.42	23.89	24.46	25.19	25.68	25.70	26.17	26.74