

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: P1055601

Luminaire Tested: S123R3DR-S1165D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055601  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S1165D950-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

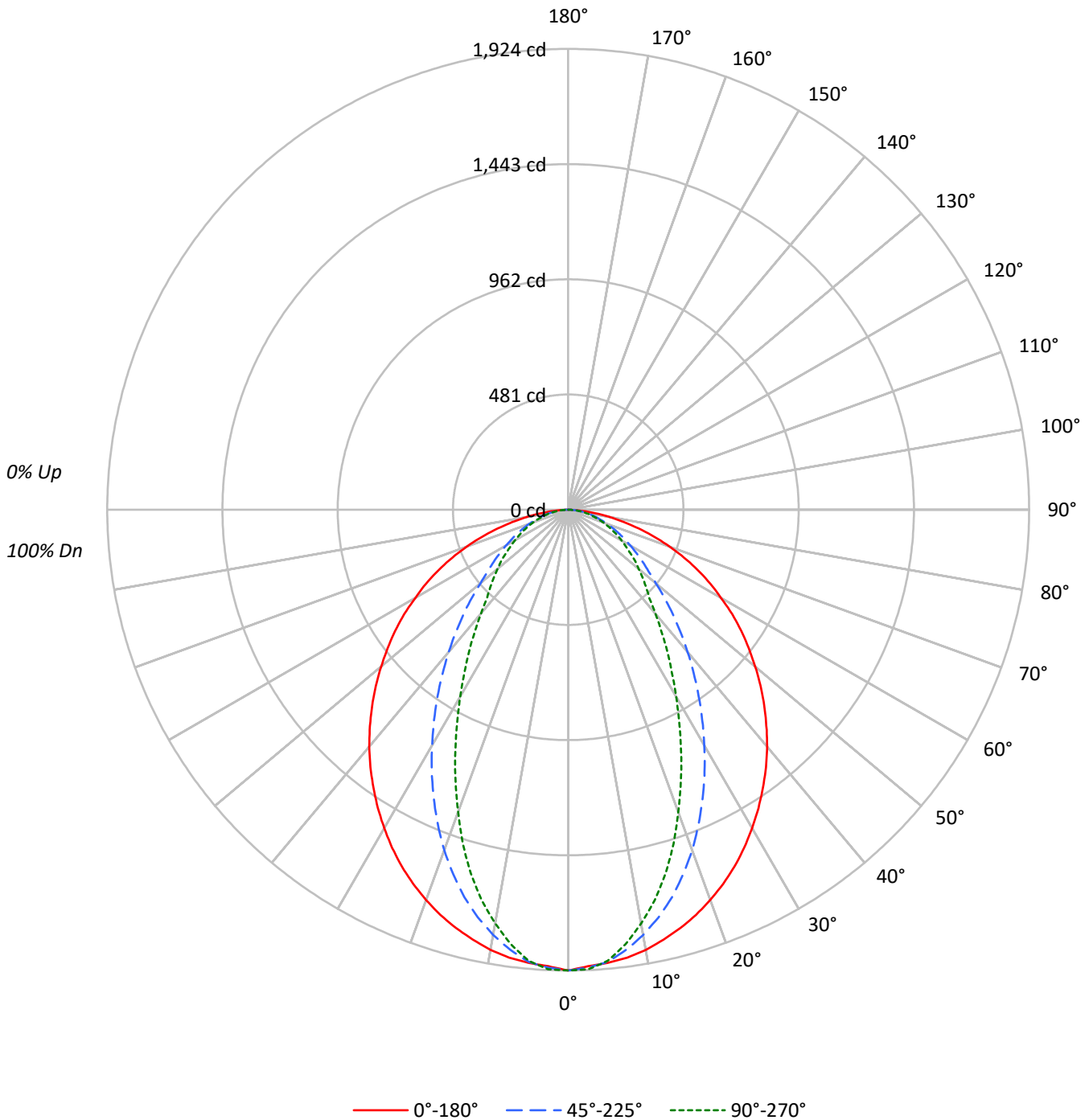
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3373.7 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	23192	23192	23192
5°	22985	22933	22881
10°	22846	22071	21472
15°	22573	20903	19610
20°	22244	19402	17241
25°	21858	17666	14834
30°	21372	15804	12539
35°	20859	13976	10588
40°	20334	12205	8899
45°	19724	10523	7850
50°	19107	8960	7206
55°	18539	7983	6653
60°	17764	7217	6209
65°	17034	6607	5828
70°	15873	6088	5478
75°	14208	5632	5161
80°	12185	5193	4798
85°	8563	4772	4579

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19724 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.3	5.3
10°-20°	471.8	14.0
20°-30°	621.5	18.4
30°-40°	630.8	18.7
40°-50°	548.3	16.3
50°-60°	429.6	12.7
60°-70°	291.8	8.7
70°-80°	158.2	4.7
80°-90°	43.5	1.3
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°	1271.6	37.7
0°-40°	1902.4	56.4
0°-60°	2880.2	85.4
0°-90°	3373.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3373.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1924	1924	1924	1924	1924	
5°	1899	1922	1895	1878	1891	180
15°	1808	1783	1675	1593	1571	510
25°	1643	1544	1328	1162	1115	756
35°	1417	1249	950	768	719	886
45°	1157	928	617	476	460	893
55°	882	613	380	324	316	787
65°	597	331	232	207	204	590
75°	305	152	121	112	111	326
85°	62	37	34	32	33	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1923.6	1923.6	1923.6	1923.6	1923.6
2.5°	1907.8	1932.3	1913.6	1915.0	1920.8
5°	1899.2	1922.2	1894.9	1877.6	1890.6
7.5°	1886.2	1903.5	1853.1	1825.8	1830.1
10°	1866.1	1871.8	1802.8	1759.6	1753.9
12.5°	1838.8	1828.7	1742.4	1679.1	1669.0
15°	1808.5	1782.6	1674.7	1592.7	1571.1
17.5°	1774.0	1730.8	1595.6	1494.9	1461.8
20°	1733.7	1673.3	1512.2	1384.1	1343.8
22.5°	1690.6	1612.9	1421.5	1270.4	1228.7
25°	1643.1	1543.8	1328.0	1162.5	1115.1
27.5°	1591.3	1474.7	1233.0	1056.1	1002.8
30°	1535.2	1402.8	1135.2	952.5	900.7
32.5°	1477.6	1326.6	1041.7	856.1	805.7
35°	1417.2	1248.9	949.6	768.3	719.4
37.5°	1355.3	1169.7	860.4	684.9	638.8
40°	1292.0	1089.2	775.5	607.2	565.4
42.5°	1224.4	1008.6	693.5	533.8	502.1
45°	1156.8	928.0	617.2	476.2	460.4
47.5°	1089.2	846.0	545.3	435.9	421.6
50°	1018.7	766.9	477.7	398.5	384.2
52.5°	949.6	689.2	421.6	362.6	352.5
55°	882.0	612.9	379.8	323.7	316.5
57.5°	811.5	538.1	338.1	293.5	284.9
60°	736.7	466.2	299.3	261.9	257.5
62.5°	669.0	398.5	264.7	234.5	230.2
65°	597.1	330.9	231.6	207.2	204.3
67.5°	523.7	274.8	201.4	181.3	179.8
70°	450.3	231.6	172.7	156.8	155.4
72.5°	378.4	191.4	145.3	135.2	132.4
75°	305.0	152.5	120.9	112.2	110.8
77.5°	238.8	118.0	96.4	90.6	89.2
80°	175.5	87.8	74.8	70.5	69.1
82.5°	115.1	60.4	53.2	50.4	50.4
85°	61.9	37.4	34.5	31.7	33.1
87.5°	21.6	15.8	15.8	14.4	15.8
90°	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	21.48	22.97	21.85	23.29	23.60	16.63	18.12	17.00	18.44	18.75
	3H	23.37	24.71	23.75	25.03	25.40	18.26	19.60	18.64	19.92	20.29
	4H	24.12	25.38	24.52	25.73	26.11	18.89	20.15	19.29	20.50	20.88
	6H	24.69	25.85	25.10	26.21	26.61	19.38	20.54	19.80	20.91	21.30
	8H	24.86	25.97	25.29	26.35	26.76	19.55	20.66	19.98	21.05	21.45
	12H	24.96	26.01	25.39	26.40	26.83	19.68	20.74	20.11	21.12	21.55
4H	2H	21.53	22.78	21.93	23.13	23.51	17.36	18.61	17.76	18.96	19.34
	3H	23.54	24.59	23.95	24.99	25.39	19.18	20.22	19.59	20.62	21.02
	4H	24.36	25.30	24.79	25.72	26.16	19.93	20.86	20.36	21.28	21.72
	6H	25.04	25.86	25.50	26.30	26.76	20.53	21.35	20.99	21.79	22.25
	8H	25.27	26.04	25.74	26.48	26.95	20.75	21.51	21.21	21.96	22.42
	12H	25.43	26.11	25.91	26.59	27.06	20.92	21.60	21.40	22.08	22.55
8H	4H	24.39	25.15	24.85	25.59	26.06	20.31	21.07	20.77	21.52	21.98
	6H	25.11	25.75	25.61	26.24	26.71	21.04	21.67	21.53	22.16	22.64
	8H	25.38	25.95	25.90	26.46	26.95	21.33	21.89	21.84	22.40	22.89
	12H	25.59	26.09	26.10	26.59	27.15	21.57	22.07	22.08	22.56	23.13
12H	4H	24.37	25.05	24.85	25.53	26.00	20.36	21.04	20.85	21.52	21.99
	6H	25.10	25.67	25.61	26.18	26.66	21.12	21.69	21.63	22.20	22.68
	8H	25.40	25.90	25.91	26.40	26.96	21.47	21.97	21.98	22.46	23.02