

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: P1059111

Luminaire Tested: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059111  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

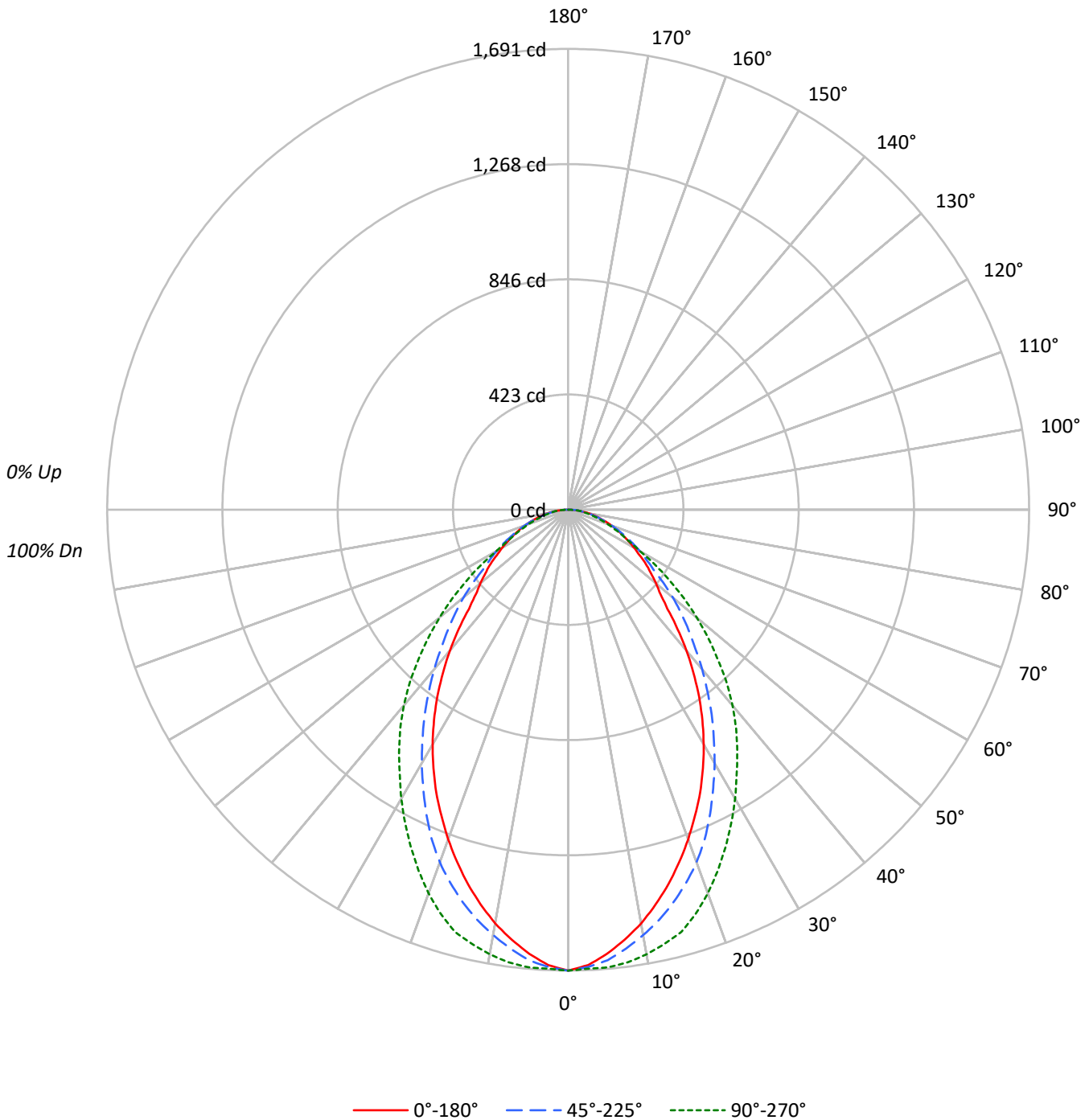
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2972.1 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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	108	104	101	97	100	97	94	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	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66																												
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58																												
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51																												
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																												
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																												
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																												
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																												
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32																												

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

	0°	45°	90°
0°	19861	19861	19861
5°	19285	19560	19869
10°	18380	18900	19751
15°	17288	18138	19501
20°	16079	17207	18717
25°	14841	15954	17689
30°	13480	14565	16598
35°	11998	13145	15503
40°	10353	11714	14369
45°	8557	10369	12883
50°	7685	9147	11248
55°	7122	7808	9327
60°	6564	7111	7144
65°	6107	6429	5985
70°	5747	5847	5246
75°	5417	5217	4623
80°	5119	4727	4328
85°	4904	5295	4904

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 12883 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.7	5.3
10°-20°	422.0	14.2
20°-30°	570.9	19.2
30°-40°	586.7	19.7
40°-50°	492.7	16.6
50°-60°	353.3	11.9
60°-70°	224.9	7.6
70°-80°	123.6	4.2
80°-90°	41.2	1.4
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°	1149.6	38.7
0°-40°	1736.4	58.4
0°-60°	2582.4	86.9
0°-90°	2972.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2972.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1691	1691	1691	1691	1691	
5°	1636	1665	1659	1671	1686	153
15°	1422	1461	1492	1556	1604	398
25°	1146	1189	1231	1298	1365	525
35°	837	882	917	998	1082	521
45°	515	560	624	715	776	407
55°	348	355	381	432	456	311
65°	220	233	231	218	215	219
75°	119	131	115	106	102	127
85°	36	38	39	41	36	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1691.4	1691.4	1691.4	1691.4	1691.4
2.5°	1672.5	1695.8	1679.7	1681.2	1685.6
5°	1636.1	1665.2	1659.4	1671.0	1685.6
7.5°	1591.0	1623.0	1624.4	1652.1	1675.4
10°	1541.5	1574.9	1585.1	1627.3	1656.5
12.5°	1483.2	1519.6	1541.5	1593.9	1631.7
15°	1422.1	1461.4	1492.0	1556.0	1604.1
17.5°	1355.1	1397.4	1436.7	1505.1	1554.6
20°	1286.7	1331.9	1377.0	1441.0	1497.8
22.5°	1215.4	1262.0	1308.6	1371.2	1433.7
25°	1145.5	1189.2	1231.4	1298.4	1365.3
27.5°	1069.9	1115.0	1151.4	1225.6	1295.5
30°	994.2	1039.3	1074.2	1151.4	1224.1
32.5°	915.6	962.1	994.2	1074.2	1149.9
35°	837.0	882.1	917.0	998.5	1081.5
37.5°	754.0	803.5	838.4	930.1	1011.6
40°	675.4	722.0	764.2	860.2	937.4
42.5°	593.9	641.9	689.9	788.9	860.2
45°	515.3	560.4	624.4	714.7	775.8
47.5°	458.5	487.6	561.9	637.5	695.8
50°	420.7	432.3	500.7	567.7	615.7
52.5°	382.8	391.6	438.1	499.3	535.7
55°	347.9	355.2	381.4	432.3	455.6
57.5°	310.0	317.3	339.2	368.3	381.4
60°	279.5	285.3	302.8	307.1	304.2
62.5°	248.9	257.6	266.4	256.2	251.8
65°	219.8	232.9	231.4	218.3	215.4
67.5°	193.6	206.7	199.4	186.3	181.9
70°	167.4	180.5	170.3	157.2	152.8
72.5°	142.6	157.2	141.2	129.5	126.6
75°	119.4	131.0	115.0	106.3	101.9
77.5°	97.5	106.3	91.7	84.4	81.5
80°	75.7	81.5	69.9	65.5	64.0
82.5°	55.3	58.2	50.9	53.9	52.4
85°	36.4	37.8	39.3	40.8	36.4
87.5°	17.5	24.7	24.7	23.3	18.9
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	17.57	19.03	17.93	19.34	19.66	18.64	20.10	19.00	20.42	20.73
	3H	19.27	20.58	19.64	20.90	21.27	19.72	21.03	20.10	21.36	21.72
	4H	19.92	21.15	20.32	21.50	21.88	20.12	21.35	20.52	21.70	22.08
	6H	20.42	21.56	20.84	21.92	22.32	20.43	21.57	20.85	21.94	22.33
	8H	20.60	21.67	21.02	22.06	22.47	20.57	21.65	21.00	22.04	22.44
	12H	20.72	21.75	21.15	22.14	22.56	20.69	21.72	21.12	22.10	22.53
4H	2H	18.17	19.40	18.57	19.75	20.13	19.04	20.27	19.44	20.62	21.00
	3H	20.10	21.12	20.51	21.52	21.92	20.36	21.38	20.77	21.78	22.18
	4H	20.91	21.83	21.34	22.24	22.68	20.88	21.79	21.31	22.21	22.65
	6H	21.56	22.35	22.02	22.80	23.26	21.31	22.11	21.77	22.55	23.01
	8H	21.78	22.52	22.24	22.97	23.44	21.50	22.25	21.97	22.69	23.16
	12H	21.95	22.62	22.43	23.10	23.57	21.68	22.35	22.17	22.83	23.30
8H	4H	21.15	21.89	21.61	22.34	22.80	21.12	21.87	21.59	22.31	22.78
	6H	21.93	22.55	22.43	23.04	23.52	21.67	22.29	22.17	22.78	23.26
	8H	22.25	22.80	22.76	23.31	23.80	21.95	22.50	22.46	23.01	23.50
	12H	22.52	23.00	23.03	23.50	24.06	22.24	22.73	22.75	23.22	23.79
12H	4H	21.16	21.82	21.64	22.30	22.77	21.15	21.82	21.63	22.29	22.77
	6H	21.97	22.52	22.48	23.03	23.52	21.72	22.28	22.24	22.79	23.28
	8H	22.34	22.83	22.85	23.33	23.89	22.07	22.55	22.58	23.05	23.61