

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059471

Luminaire Tested: S123RDR-H1000D935-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059471  
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: S123RDR-H1000D935-X4F0-XX-UDD-WVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

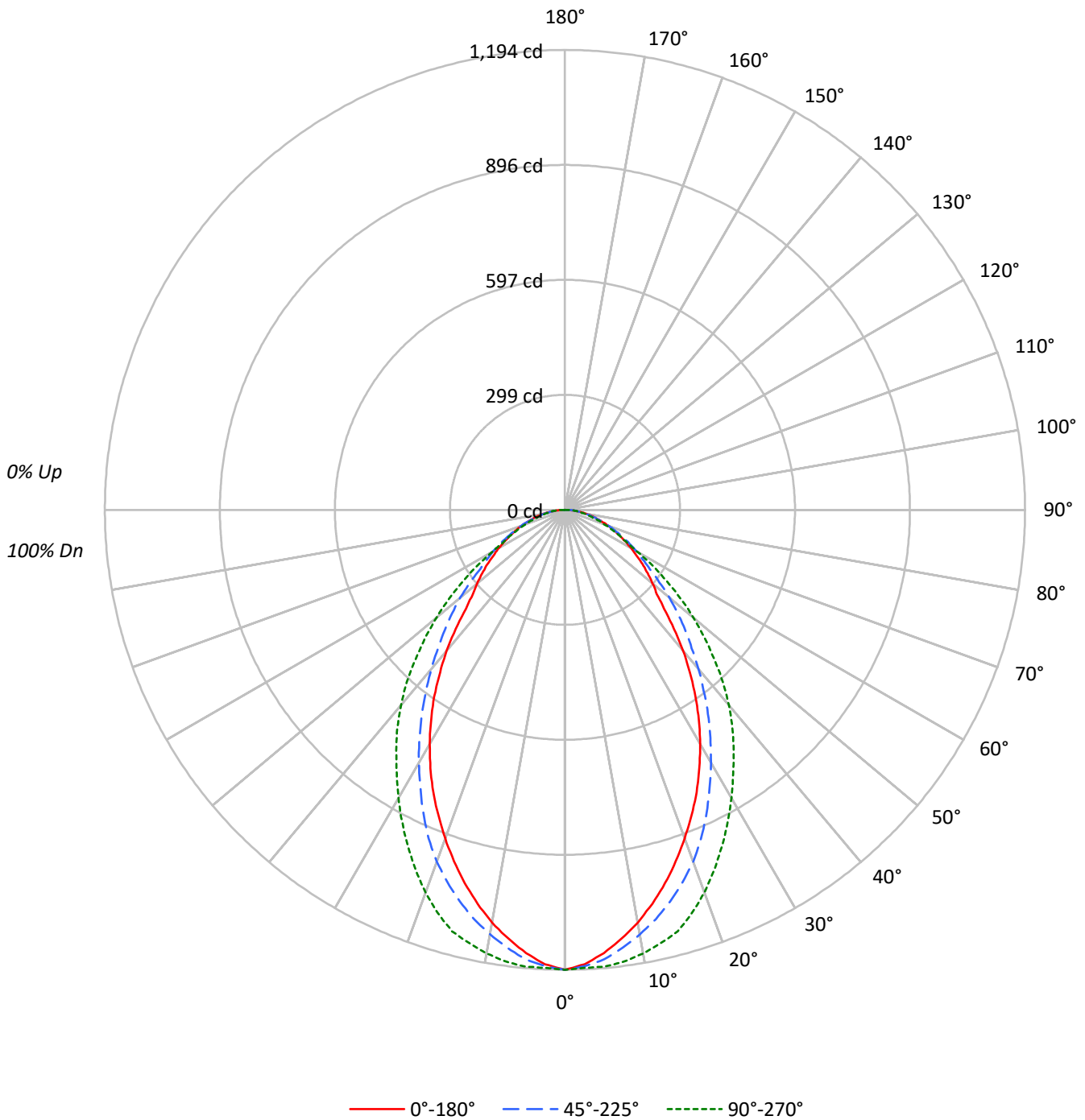
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2098.3 lumens  
Efficiency: N/A  
Efficacy: 67.3 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): 31.2  
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	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°	14022	14022	14022
5°	13615	13809	14027
10°	12976	13344	13943
15°	12205	12805	13767
20°	11351	12147	13213
25°	10478	11264	12489
30°	9517	10283	11718
35°	8470	9280	10945
40°	7309	8270	10145
45°	6041	7322	9095
50°	5426	6458	7941
55°	5028	5511	6584
60°	4634	5019	5045
65°	4312	4540	4226
70°	4058	4127	3704
75°	3825	3684	3262
80°	3611	3334	3057
85°	3463	3732	3463

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9095 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.6	5.3
10°-20°	298.0	14.2
20°-30°	403.1	19.2
30°-40°	414.2	19.7
40°-50°	347.9	16.6
50°-60°	249.4	11.9
60°-70°	158.8	7.6
70°-80°	87.2	4.2
80°-90°	29.1	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°	811.6	38.7
0°-40°	1225.9	58.4
0°-60°	1823.1	86.9
0°-90°	2098.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2098.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1155	1176	1172	1180	1190	108
15°	1004	1032	1053	1098	1132	281
25°	809	840	869	917	964	371
35°	591	623	647	705	764	368
45°	364	396	441	505	548	287
55°	246	251	269	305	322	219
65°	155	164	163	154	152	155
75°	84	92	81	75	72	90
85°	26	27	28	29	26	28
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1180.8	1197.2	1185.9	1186.9	1190.0
5°	1155.1	1175.6	1171.5	1179.7	1190.0
7.5°	1123.2	1145.8	1146.8	1166.4	1182.8
10°	1088.3	1111.9	1119.1	1148.9	1169.4
12.5°	1047.2	1072.9	1088.3	1125.3	1152.0
15°	1004.0	1031.7	1053.3	1098.5	1132.5
17.5°	956.7	986.5	1014.3	1062.6	1097.5
20°	908.4	940.3	972.1	1017.4	1057.4
22.5°	858.1	891.0	923.8	968.0	1012.2
25°	808.7	839.6	869.4	916.6	963.9
27.5°	755.3	787.2	812.9	865.3	914.6
30°	701.9	733.7	758.4	812.9	864.2
32.5°	646.4	679.3	701.9	758.4	811.8
35°	590.9	622.7	647.4	705.0	763.5
37.5°	532.3	567.3	591.9	656.7	714.2
40°	476.8	509.7	539.5	607.3	661.8
42.5°	419.3	453.2	487.1	557.0	607.3
45°	363.8	395.6	440.9	504.6	547.7
47.5°	323.7	344.3	396.7	450.1	491.2
50°	297.0	305.2	353.5	400.8	434.7
52.5°	270.3	276.4	309.3	352.5	378.2
55°	245.6	250.7	269.2	305.2	321.6
57.5°	218.9	224.0	239.4	260.0	269.2
60°	197.3	201.4	213.7	216.8	214.8
62.5°	175.7	181.9	188.1	180.9	177.8
65°	155.2	164.4	163.4	154.1	152.1
67.5°	136.7	145.9	140.8	131.5	128.5
70°	118.2	127.4	120.2	111.0	107.9
72.5°	100.7	111.0	99.7	91.5	89.4
75°	84.3	92.5	81.2	75.0	71.9
77.5°	68.9	75.0	64.7	59.6	57.5
80°	53.4	57.5	49.3	46.2	45.2
82.5°	39.1	41.1	36.0	38.0	37.0
85°	25.7	26.7	27.7	28.8	25.7
87.5°	12.3	17.5	17.5	16.4	13.4
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	16.36	17.82	16.72	18.14	18.45	17.43	18.89	17.79	19.21	19.52
	3H	18.06	19.37	18.43	19.70	20.06	18.51	19.82	18.89	20.15	20.52
	4H	18.71	19.94	19.11	20.29	20.67	18.91	20.14	19.32	20.49	20.87
	6H	19.21	20.35	19.63	20.71	21.11	19.22	20.36	19.64	20.73	21.12
	8H	19.39	20.46	19.81	20.85	21.26	19.36	20.44	19.79	20.83	21.23
	12H	19.51	20.54	19.94	20.93	21.36	19.48	20.51	19.91	20.89	21.32
4H	2H	16.96	18.19	17.36	18.54	18.92	17.83	19.06	18.23	19.41	19.79
	3H	18.89	19.91	19.30	20.31	20.71	19.15	20.17	19.56	20.57	20.97
	4H	19.70	20.62	20.13	21.03	21.47	19.67	20.59	20.10	21.00	21.44
	6H	20.35	21.14	20.81	21.59	22.05	20.10	20.90	20.56	21.34	21.80
	8H	20.57	21.31	21.03	21.76	22.23	20.29	21.04	20.76	21.48	21.95
	12H	20.74	21.41	21.23	21.89	22.36	20.47	21.14	20.96	21.62	22.09
8H	4H	19.94	20.68	20.40	21.13	21.59	19.91	20.66	20.38	21.10	21.57
	6H	20.72	21.34	21.22	21.83	22.31	20.46	21.08	20.96	21.57	22.05
	8H	21.04	21.59	21.55	22.10	22.59	20.74	21.29	21.25	21.80	22.29
	12H	21.31	21.80	21.82	22.29	22.85	21.03	21.52	21.54	22.01	22.58
12H	4H	19.95	20.61	20.43	21.09	21.56	19.94	20.61	20.42	21.08	21.56
	6H	20.76	21.31	21.27	21.82	22.31	20.51	21.07	21.03	21.58	22.07
	8H	21.13	21.62	21.65	22.12	22.68	20.86	21.34	21.37	21.84	22.40