

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: P1059480

Luminaire Tested: S123RDR-H1000D940-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059480  
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-H1000D940-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

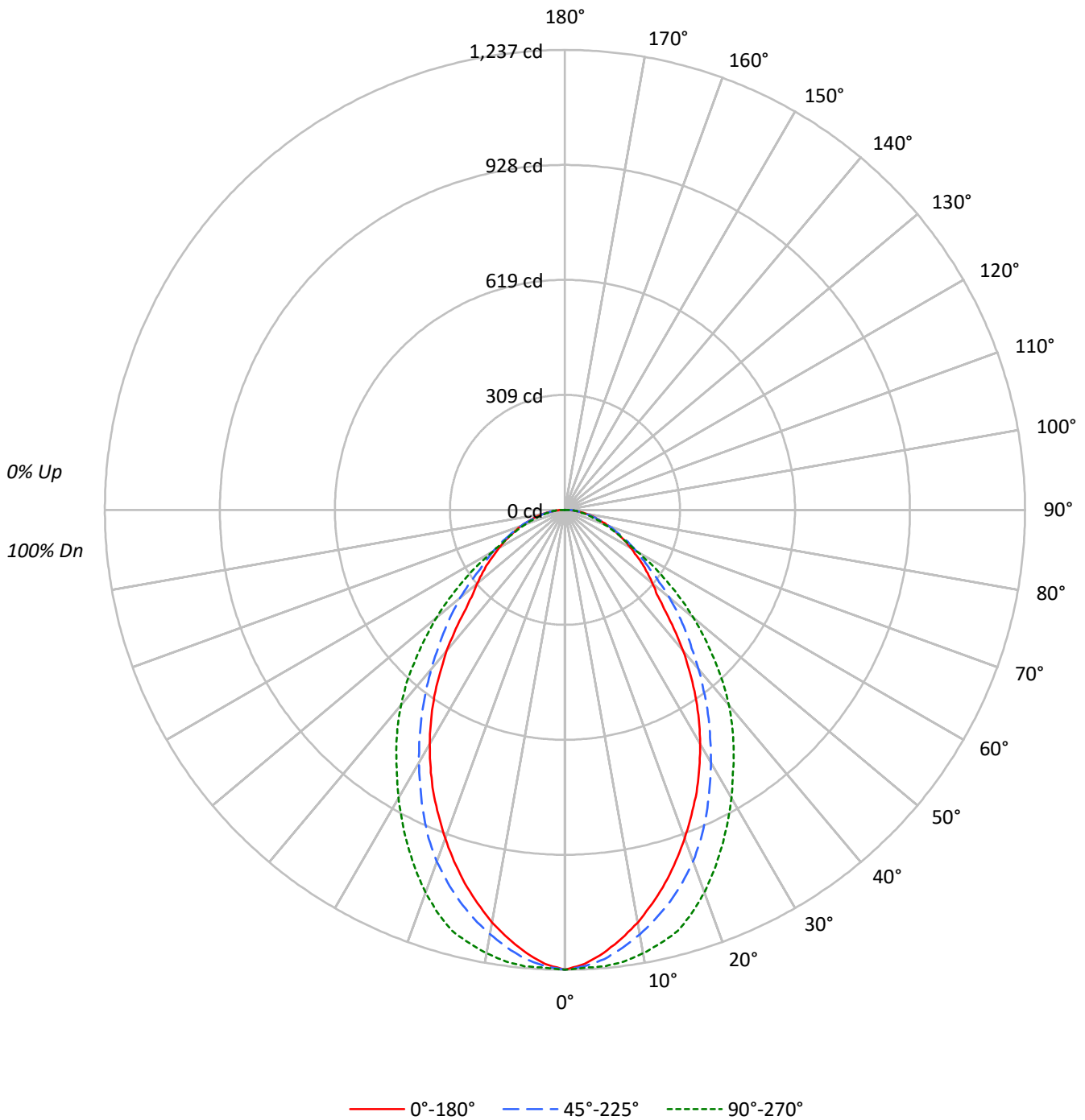
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2173.1 lumens  
Efficiency: N/A  
Efficacy: 69.7 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	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°	14522	14522	14522
5°	14101	14302	14527
10°	13439	13819	14442
15°	12640	13262	14257
20°	11756	12581	13686
25°	10852	11666	12934
30°	9856	10649	12137
35°	8773	9612	11336
40°	7569	8566	10506
45°	6257	7582	9421
50°	5619	6688	8224
55°	5208	5708	6819
60°	4798	5200	5223
65°	4465	4701	4376
70°	4202	4274	3838
75°	3961	3816	3380
80°	3739	3455	3165
85°	3584	3867	3584

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9421 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.5	5.3
10°-20°	308.6	14.2
20°-30°	417.5	19.2
30°-40°	429.0	19.7
40°-50°	360.3	16.6
50°-60°	258.3	11.9
60°-70°	164.5	7.6
70°-80°	90.4	4.2
80°-90°	30.1	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°	840.6	38.7
0°-40°	1269.6	58.4
0°-60°	1888.2	86.9
0°-90°	2173.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2173.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1237	1237	1237	1237	1237	
5°	1196	1218	1213	1222	1232	112
15°	1040	1068	1091	1138	1173	291
25°	838	870	900	949	998	384
35°	612	645	670	730	791	381
45°	377	410	457	523	567	297
55°	254	260	279	316	333	227
65°	161	170	169	160	158	160
75°	87	96	84	78	74	93
85°	27	28	29	30	27	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1236.7	1236.7	1236.7	1236.7	1236.7
2.5°	1222.9	1239.9	1228.2	1229.3	1232.4
5°	1196.3	1217.5	1213.3	1221.8	1232.4
7.5°	1163.3	1186.7	1187.7	1208.0	1225.0
10°	1127.1	1151.6	1159.0	1189.9	1211.2
12.5°	1084.5	1111.1	1127.1	1165.4	1193.1
15°	1039.8	1068.5	1090.9	1137.7	1172.8
17.5°	990.9	1021.7	1050.5	1100.5	1136.7
20°	940.8	973.8	1006.8	1053.6	1095.2
22.5°	888.7	922.7	956.8	1002.6	1048.3
25°	837.6	869.5	900.4	949.3	998.3
27.5°	782.3	815.2	841.9	896.1	947.2
30°	726.9	759.9	785.4	841.9	895.1
32.5°	669.4	703.5	726.9	785.4	840.8
35°	612.0	645.0	670.5	730.1	790.8
37.5°	551.3	587.5	613.0	680.1	739.7
40°	493.8	527.9	558.8	629.0	685.4
42.5°	434.2	469.4	504.5	576.8	629.0
45°	376.8	409.8	456.6	522.6	567.3
47.5°	335.3	356.5	410.8	466.2	508.7
50°	307.6	316.1	366.1	415.1	450.2
52.5°	279.9	286.3	320.4	365.1	391.7
55°	254.4	259.7	278.8	316.1	333.1
57.5°	226.7	232.0	248.0	269.3	278.8
60°	204.3	208.6	221.4	224.6	222.4
62.5°	182.0	188.4	194.8	187.3	184.1
65°	160.7	170.3	169.2	159.6	157.5
67.5°	141.6	151.1	145.8	136.2	133.0
70°	122.4	132.0	124.5	114.9	111.8
72.5°	104.3	114.9	103.2	94.7	92.6
75°	87.3	95.8	84.1	77.7	74.5
77.5°	71.3	77.7	67.1	61.7	59.6
80°	55.3	59.6	51.1	47.9	46.8
82.5°	40.4	42.6	37.3	39.4	38.3
85°	26.6	27.7	28.7	29.8	26.6
87.5°	12.8	18.1	18.1	17.0	13.8
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	16.48	17.94	16.85	18.26	18.57	17.55	19.01	17.92	19.33	19.64
	3H	18.18	19.49	18.56	19.82	20.18	18.64	19.95	19.01	20.27	20.64
	4H	18.83	20.06	19.23	20.41	20.79	19.04	20.26	19.44	20.61	20.99
	6H	19.34	20.47	19.75	20.84	21.23	19.35	20.48	19.76	20.85	21.24
	8H	19.51	20.59	19.94	20.98	21.38	19.48	20.56	19.91	20.95	21.35
	12H	19.63	20.66	20.06	21.05	21.48	19.60	20.63	20.03	21.02	21.45
4H	2H	17.08	18.31	17.48	18.66	19.04	17.95	19.18	18.35	19.53	19.91
	3H	19.01	20.03	19.42	20.43	20.83	19.27	20.29	19.68	20.69	21.09
	4H	19.82	20.74	20.26	21.15	21.59	19.79	20.71	20.22	21.12	21.56
	6H	20.47	21.27	20.93	21.71	22.17	20.22	21.02	20.68	21.46	21.92
	8H	20.69	21.44	21.16	21.88	22.35	20.41	21.16	20.88	21.60	22.07
	12H	20.86	21.53	21.35	22.01	22.48	20.60	21.26	21.08	21.74	22.21
8H	4H	20.06	20.80	20.52	21.25	21.72	20.04	20.78	20.50	21.23	21.69
	6H	20.85	21.46	21.34	21.95	22.43	20.58	21.20	21.08	21.69	22.17
	8H	21.16	21.71	21.68	22.22	22.71	20.86	21.41	21.38	21.92	22.41
	12H	21.43	21.92	21.94	22.41	22.98	21.15	21.64	21.66	22.14	22.70
12H	4H	20.07	20.74	20.55	21.21	21.69	20.06	20.73	20.55	21.21	21.68
	6H	20.88	21.43	21.40	21.95	22.43	20.64	21.19	21.15	21.70	22.19
	8H	21.26	21.75	21.77	22.24	22.80	20.98	21.47	21.49	21.96	22.53