

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: P1060974

Luminaire Tested: S124RDR-H795D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060974  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H795D840-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

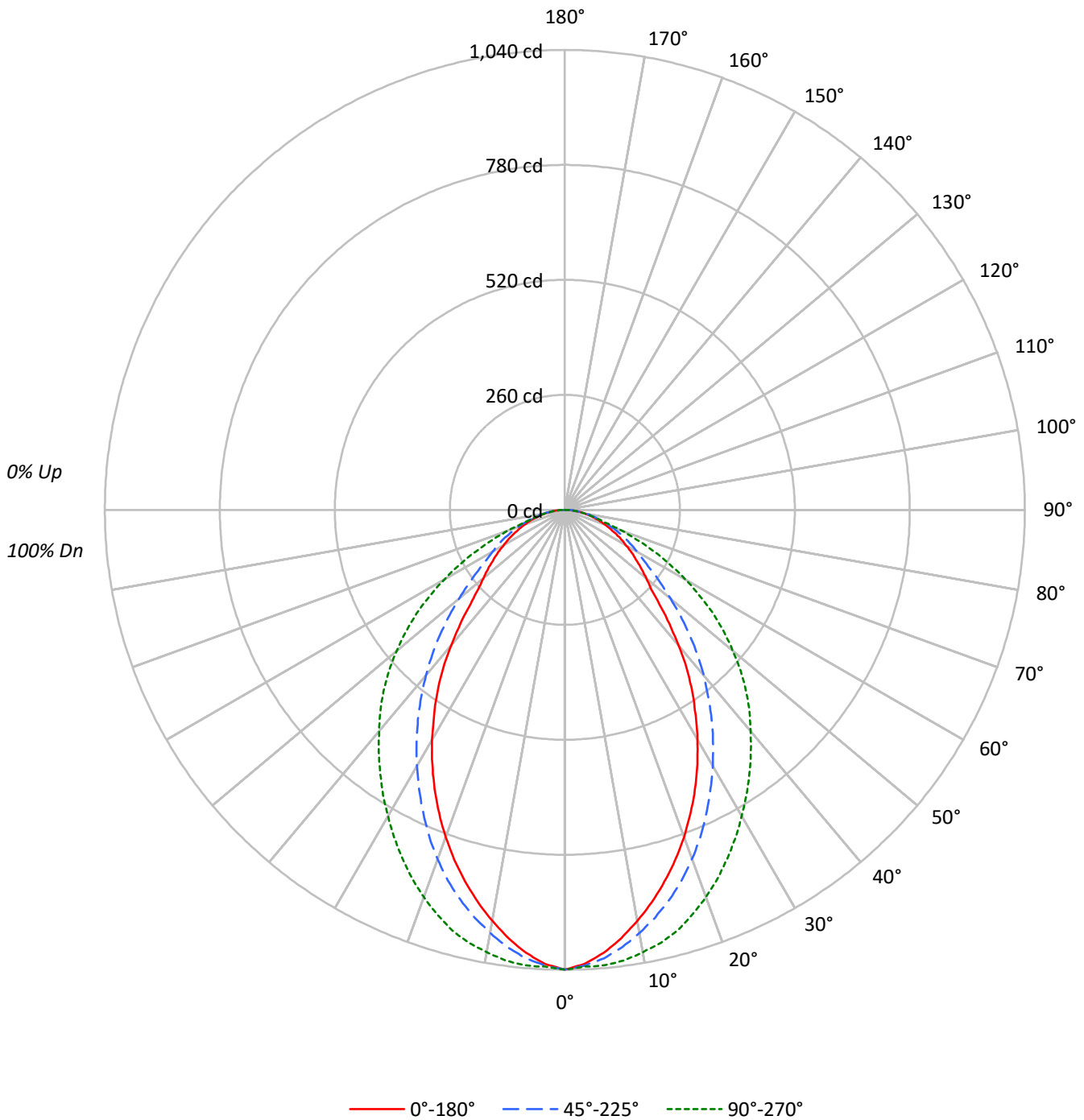
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1907.6 lumens  
Efficiency: N/A  
Efficacy: 81.2 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
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	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	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	38	37
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31

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

	0°	45°	90°
0°	8952	8952	8952
5°	8692	8796	8939
10°	8253	8495	8881
15°	7759	8137	8776
20°	7216	7706	8541
25°	6618	7194	8260
30°	5965	6651	7950
35°	5280	6083	7650
40°	4489	5491	7343
45°	3675	4852	7058
50°	3217	4166	6643
55°	2956	3591	6146
60°	2742	3233	5418
65°	2567	3036	4536
70°	2409	2780	3404
75°	2266	2542	2479
80°	2098	2326	2098
85°	1907	2272	1818

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7058 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.1	5.0
10°-20°	258.5	13.6
20°-30°	353.4	18.5
30°-40°	371.4	19.5
40°-50°	322.3	16.9
50°-60°	243.1	12.7
60°-70°	157.6	8.3
70°-80°	80.9	4.2
80°-90°	24.5	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°	707.9	37.1
0°-40°	1079.3	56.6
0°-60°	1644.7	86.2
0°-90°	1907.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1907.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1006	1019	1018	1026	1034	94
15°	870	892	913	954	984	244
25°	696	721	757	815	869	319
35°	502	530	579	656	728	312
45°	302	330	398	498	580	238
55°	197	202	239	340	409	177
65°	126	129	149	180	223	125
75°	68	76	76	77	74	72
85°	19	24	23	22	18	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1039.6	1039.6	1039.6	1039.6	1039.6
2.5°	1027.7	1040.6	1031.4	1033.2	1034.1
5°	1005.6	1019.4	1017.6	1025.8	1034.1
7.5°	977.1	993.6	997.3	1013.9	1027.7
10°	943.9	962.3	971.5	998.2	1015.7
12.5°	909.0	927.4	943.9	978.0	1002.8
15°	870.3	891.5	912.7	954.1	984.4
17.5°	829.9	851.9	878.6	923.7	959.6
20°	787.5	809.6	840.9	889.7	932.0
22.5°	742.5	767.3	800.4	852.9	902.5
25°	696.5	721.3	757.2	815.1	869.4
27.5°	648.6	674.4	713.0	777.4	835.4
30°	599.9	627.5	668.9	736.9	799.5
32.5°	550.2	579.6	623.8	696.5	764.5
35°	502.3	529.9	578.7	656.0	727.7
37.5°	452.7	480.3	532.7	616.4	690.9
40°	399.3	429.7	488.5	575.0	653.2
42.5°	349.6	380.0	443.5	535.5	617.3
45°	301.8	330.3	398.4	497.7	579.6
47.5°	265.0	285.2	353.3	460.9	539.1
50°	240.1	249.3	311.0	420.5	495.9
52.5°	218.0	225.4	272.3	380.0	453.6
55°	196.9	202.4	239.2	339.5	409.4
57.5°	178.5	181.2	209.8	299.0	361.6
60°	159.2	162.8	187.7	257.6	314.6
62.5°	143.5	145.4	168.4	218.0	267.7
65°	126.0	128.8	149.0	180.3	222.6
67.5°	110.4	115.0	128.8	147.2	175.7
70°	95.7	102.1	110.4	119.6	135.2
72.5°	81.9	89.2	93.8	97.5	94.8
75°	68.1	76.4	76.4	77.3	74.5
77.5°	55.2	62.6	61.6	60.7	57.0
80°	42.3	48.8	46.9	46.0	42.3
82.5°	31.3	35.9	34.0	33.1	28.5
85°	19.3	23.9	23.0	22.1	18.4
87.5°	9.2	13.8	12.9	12.0	8.3
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	14.12	15.60	14.48	15.92	16.23	17.86	19.34	18.22	19.66	19.97
	3H	15.79	17.12	16.16	17.45	17.81	18.98	20.31	19.36	20.64	21.00
	4H	16.45	17.70	16.85	18.05	18.43	19.28	20.53	19.68	20.88	21.26
	6H	16.96	18.11	17.37	18.48	18.87	19.48	20.63	19.89	21.00	21.39
	8H	17.14	18.23	17.56	18.62	19.02	19.53	20.63	19.96	21.02	21.42
	12H	17.25	18.30	17.69	18.69	19.12	19.57	20.62	20.00	21.00	21.43
4H	2H	14.91	16.16	15.31	16.51	16.89	18.02	19.27	18.42	19.62	20.00
	3H	16.78	17.82	17.19	18.22	18.62	19.35	20.39	19.76	20.79	21.19
	4H	17.59	18.52	18.02	18.93	19.37	19.77	20.70	20.20	21.12	21.56
	6H	18.23	19.04	18.69	19.48	19.94	20.09	20.90	20.55	21.34	21.80
	8H	18.45	19.21	18.92	19.65	20.12	20.18	20.94	20.65	21.39	21.85
	12H	18.62	19.29	19.10	19.77	20.24	20.26	20.93	20.74	21.41	21.88
8H	4H	17.93	18.69	18.40	19.14	19.60	19.90	20.66	20.37	21.10	21.57
	6H	18.72	19.35	19.22	19.84	20.32	20.32	20.95	20.82	21.44	21.92
	8H	19.04	19.60	19.56	20.11	20.60	20.48	21.04	20.99	21.55	22.04
	12H	19.31	19.80	19.82	20.30	20.86	20.62	21.11	21.13	21.61	22.17
12H	4H	17.96	18.64	18.45	19.12	19.59	19.91	20.58	20.39	21.06	21.53
	6H	18.79	19.35	19.30	19.86	20.35	20.34	20.90	20.86	21.41	21.90
	8H	19.17	19.67	19.68	20.16	20.73	20.55	21.05	21.06	21.54	22.11