

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: P1059495

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059495  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1165D830-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

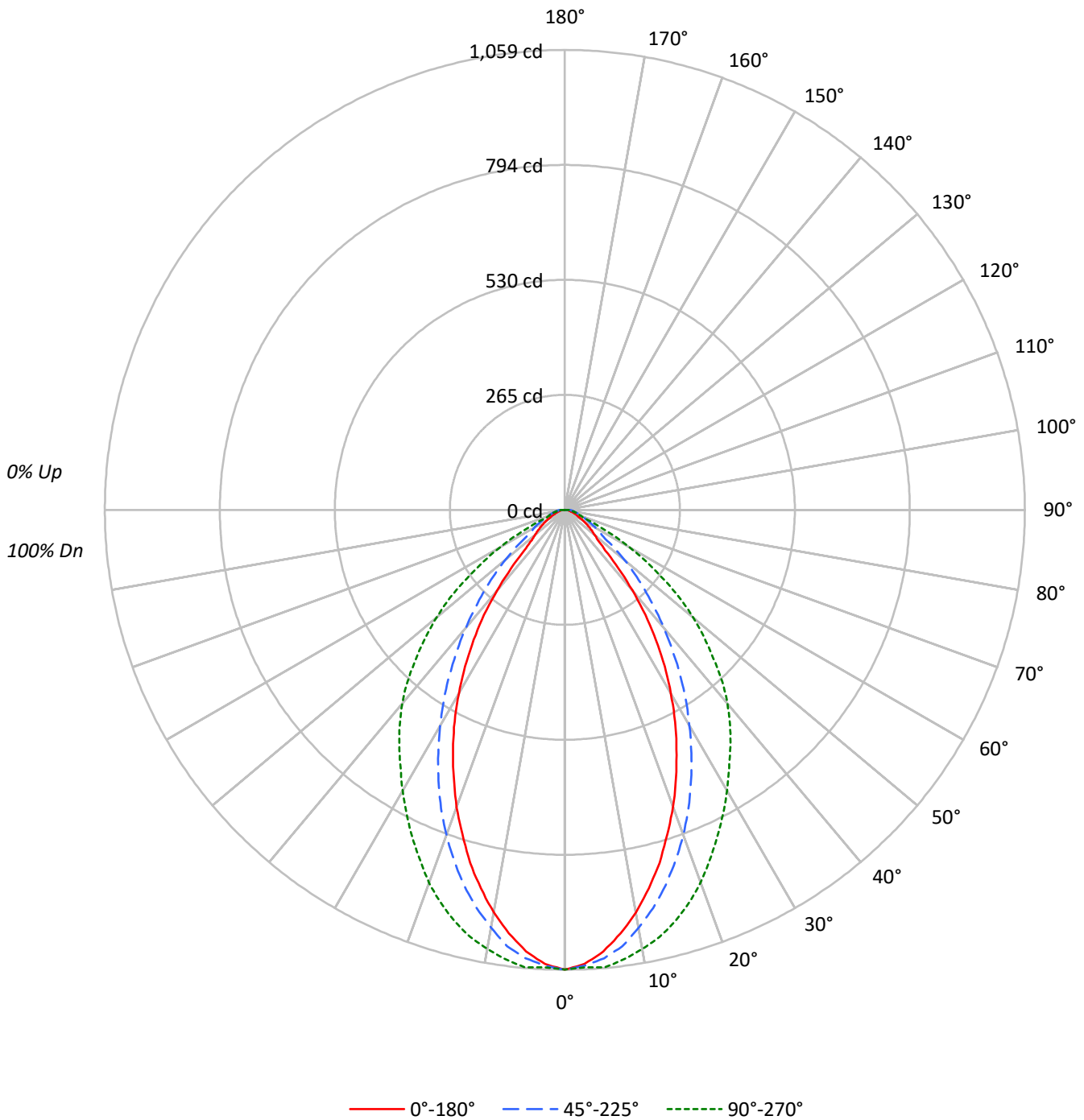
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1421.0 lumens  
Efficiency: N/A  
Efficacy: 38.9 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.5  
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	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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				

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

	0°	45°	90°
0°	12431	12431	12431
5°	12028	12214	12463
10°	11226	11649	12246
15°	10231	10886	11926
20°	9103	9958	11420
25°	7888	8910	10768
30°	6615	7773	10127
35°	5241	6617	9520
40°	3710	5442	8929
45°	2184	4303	8036
50°	1633	3266	7039
55°	1374	2207	5652
60°	1111	1883	4014
65°	878	1609	2120
70°	769	1401	1308
75°	717	1311	1252
80°	710	1420	1244
85°	889	2129	1590

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8036 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.4	6.9
10°-20°	253.2	17.8
20°-30°	322.4	22.7
30°-40°	303.3	21.3
40°-50°	218.4	15.4
50°-60°	126.1	8.9
60°-70°	57.7	4.1
70°-80°	28.8	2.0
80°-90°	13.6	1.0
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°	673.0	47.4
0°-40°	976.4	68.7
0°-60°	1320.9	93.0
0°-90°	1421.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1421.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1059	1059	1059	1059	1059	
5°	1020	1038	1036	1047	1057	95
15°	842	872	896	946	981	235
25°	609	640	688	764	831	278
35°	366	397	462	568	664	227
45°	132	164	259	389	484	111
55°	67	70	108	205	276	60
65°	32	45	58	64	76	32
75°	16	30	29	28	28	17
85°	7	14	16	14	12	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1058.6	1058.6	1058.6	1058.6	1058.6
2.5°	1046.7	1059.9	1050.7	1052.0	1054.6
5°	1020.4	1037.5	1036.2	1046.7	1057.3
7.5°	983.6	1003.3	1013.9	1029.6	1044.1
10°	941.5	963.9	977.0	1006.0	1027.0
12.5°	892.9	921.8	938.9	977.0	1007.3
15°	841.6	871.8	895.5	945.5	981.0
17.5°	783.7	816.6	846.9	906.0	949.4
20°	728.5	760.1	796.9	861.3	913.9
22.5°	668.0	702.2	744.3	812.7	871.8
25°	608.8	640.4	687.7	764.0	831.1
27.5°	549.7	581.2	631.2	715.4	789.0
30°	487.9	520.7	573.3	666.7	746.9
32.5°	427.4	458.9	518.1	619.4	703.5
35°	365.6	397.1	461.6	568.1	664.1
37.5°	305.1	338.0	406.3	526.0	624.6
40°	242.0	277.5	355.0	482.6	582.5
42.5°	182.8	220.9	303.8	437.9	536.5
45°	131.5	164.4	259.1	389.2	483.9
47.5°	102.6	119.7	218.3	339.3	435.3
50°	89.4	92.0	178.8	293.2	385.3
52.5°	77.6	80.2	140.7	249.8	332.7
55°	67.1	69.7	107.8	205.1	276.1
57.5°	56.5	60.5	89.4	163.1	222.2
60°	47.3	52.6	80.2	124.9	170.9
62.5°	38.1	47.3	68.4	92.0	122.3
65°	31.6	44.7	57.9	64.4	76.3
67.5°	26.3	40.8	48.7	46.0	44.7
70°	22.4	36.8	40.8	36.8	38.1
72.5°	18.4	34.2	34.2	31.6	31.6
75°	15.8	30.2	28.9	27.6	27.6
77.5°	13.1	26.3	25.0	23.7	22.4
80°	10.5	21.0	21.0	19.7	18.4
82.5°	9.2	17.1	17.1	17.1	14.5
85°	6.6	14.5	15.8	14.5	11.8
87.5°	5.3	13.1	13.1	11.8	7.9
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	8.73	10.05	9.09	10.36	10.67	16.09	17.41	16.46	17.72	18.04
	3H	10.12	11.29	10.50	11.62	11.98	16.32	17.49	16.70	17.82	18.18
	4H	10.67	11.76	11.07	12.11	12.49	16.44	17.53	16.84	17.88	18.26
	6H	11.10	12.10	11.52	12.47	12.87	16.55	17.55	16.96	17.92	18.32
	8H	11.28	12.23	11.71	12.62	13.02	16.60	17.55	17.03	17.94	18.35
	12H	11.43	12.34	11.87	12.72	13.15	16.66	17.57	17.09	17.95	18.38
4H	2H	9.83	10.92	10.23	11.27	11.65	16.05	17.14	16.45	17.49	17.87
	3H	11.49	12.38	11.90	12.79	13.19	16.41	17.30	16.82	17.71	18.11
	4H	12.30	13.10	12.73	13.52	13.96	16.60	17.40	17.04	17.82	18.27
	6H	12.93	13.62	13.40	14.07	14.54	16.83	17.52	17.30	17.97	18.44
	8H	13.17	13.81	13.64	14.26	14.73	16.94	17.58	17.41	18.03	18.50
	12H	13.38	13.95	13.87	14.44	14.91	17.07	17.64	17.55	18.12	18.59
8H	4H	12.74	13.39	13.21	13.83	14.30	16.64	17.29	17.11	17.74	18.21
	6H	13.65	14.18	14.15	14.68	15.16	16.97	17.50	17.47	18.00	18.48
	8H	14.07	14.55	14.59	15.06	15.55	17.16	17.64	17.68	18.15	18.64
	12H	14.49	14.91	15.00	15.41	15.98	17.41	17.83	17.93	18.33	18.90
12H	4H	12.80	13.37	13.28	13.85	14.33	16.63	17.20	17.12	17.69	18.16
	6H	13.78	14.26	14.30	14.78	15.27	16.99	17.46	17.51	17.98	18.47
	8H	14.32	14.75	14.84	15.24	15.81	17.24	17.67	17.76	18.16	18.73