

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: P1059498

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059498
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-H1165D830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

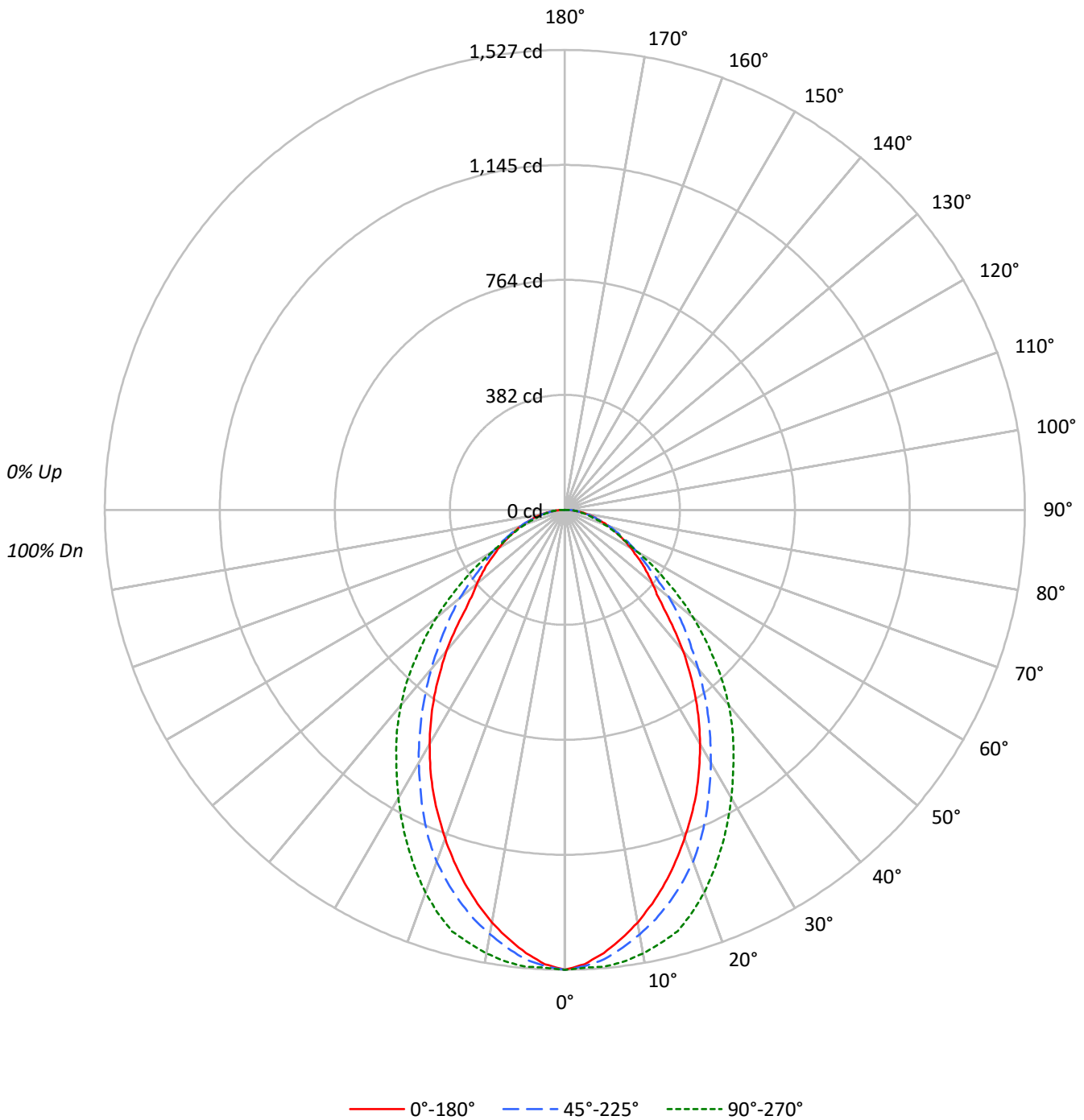
Lumens per Lamp: N/A
Luminaire Lumens: 2683.3 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	17932	17932	17932
5°	17411	17659	17938
10°	16594	17064	17832
15°	15608	16375	17605
20°	14517	15535	16898
25°	13399	14405	15971
30°	12171	13151	14985
35°	10831	11868	13997
40°	9347	10575	12973
45°	7725	9363	11631
50°	6938	8259	10155
55°	6430	7049	8420
60°	5925	6418	6451
65°	5513	5807	5404
70°	5188	5280	4738
75°	4891	4709	4174
80°	4619	4267	3909
85°	4433	4783	4433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 11631 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.4	5.3
10°-20°	381.0	14.2
20°-30°	515.5	19.2
30°-40°	529.7	19.7
40°-50°	444.9	16.6
50°-60°	319.0	11.9
60°-70°	203.1	7.6
70°-80°	111.6	4.2
80°-90°	37.2	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°	1037.9	38.7
0°-40°	1567.6	58.4
0°-60°	2331.5	86.9
0°-90°	2683.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2683.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1477	1503	1498	1509	1522	138
15°	1284	1319	1347	1405	1448	360
25°	1034	1074	1112	1172	1233	474
35°	756	796	828	902	976	470
45°	465	506	564	645	700	367
55°	314	321	344	390	411	281
65°	198	210	209	197	194	198
75°	108	118	104	96	92	115
85°	33	34	36	37	33	36
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.1	1527.1	1527.1	1527.1	1527.1
2.5°	1510.0	1531.0	1516.5	1517.9	1521.8
5°	1477.1	1503.4	1498.1	1508.7	1521.8
7.5°	1436.4	1465.3	1466.6	1491.6	1512.6
10°	1391.7	1421.9	1431.1	1469.2	1495.5
12.5°	1339.1	1372.0	1391.7	1439.0	1473.2
15°	1283.9	1319.4	1347.0	1404.8	1448.2
17.5°	1223.5	1261.6	1297.1	1358.8	1403.5
20°	1161.7	1202.5	1243.2	1301.0	1352.3
22.5°	1097.3	1139.4	1181.4	1237.9	1294.4
25°	1034.2	1073.7	1111.8	1172.2	1232.7
27.5°	965.9	1006.6	1039.5	1106.5	1169.6
30°	897.6	938.3	969.9	1039.5	1105.2
32.5°	826.6	868.7	897.6	969.9	1038.2
35°	755.6	796.4	827.9	901.5	976.4
37.5°	680.7	725.4	757.0	839.7	913.3
40°	609.8	651.8	689.9	776.7	846.3
42.5°	536.2	579.5	622.9	712.3	776.7
45°	465.2	506.0	563.8	645.3	700.4
47.5°	414.0	440.2	507.3	575.6	628.2
50°	379.8	390.3	452.1	512.5	555.9
52.5°	345.6	353.5	395.6	450.8	483.6
55°	314.1	320.7	344.3	390.3	411.3
57.5°	279.9	286.5	306.2	332.5	344.3
60°	252.3	257.6	273.3	277.3	274.7
62.5°	224.7	232.6	240.5	231.3	227.4
65°	198.4	210.3	209.0	197.1	194.5
67.5°	174.8	186.6	180.0	168.2	164.3
70°	151.1	163.0	153.8	141.9	138.0
72.5°	128.8	141.9	127.5	117.0	114.3
75°	107.8	118.3	103.8	95.9	92.0
77.5°	88.0	95.9	82.8	76.2	73.6
80°	68.3	73.6	63.1	59.1	57.8
82.5°	49.9	52.6	46.0	48.6	47.3
85°	32.9	34.2	35.5	36.8	32.9
87.5°	15.8	22.3	22.3	21.0	17.1
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	17.21	18.68	17.58	18.99	19.30	18.28	19.75	18.65	20.06	20.37
	3H	18.91	20.22	19.29	20.55	20.91	19.37	20.68	19.75	21.01	21.37
	4H	19.57	20.79	19.97	21.14	21.52	19.77	21.00	20.17	21.35	21.73
	6H	20.07	21.20	20.48	21.57	21.96	20.08	21.21	20.49	21.58	21.97
	8H	20.24	21.32	20.67	21.71	22.11	20.21	21.29	20.64	21.68	22.08
	12H	20.37	21.40	20.80	21.78	22.21	20.33	21.37	20.77	21.75	22.18
4H	2H	17.82	19.04	18.22	19.39	19.77	18.69	19.91	19.09	20.26	20.64
	3H	19.74	20.76	20.15	21.16	21.56	20.01	21.02	20.42	21.42	21.83
	4H	20.56	21.47	20.99	21.89	22.33	20.52	21.44	20.96	21.86	22.30
	6H	21.20	22.00	21.66	22.44	22.90	20.96	21.75	21.41	22.20	22.66
	8H	21.42	22.17	21.89	22.61	23.08	21.15	21.89	21.61	22.34	22.80
	12H	21.60	22.26	22.08	22.74	23.21	21.33	21.99	21.81	22.47	22.94
8H	4H	20.79	21.54	21.26	21.98	22.45	20.77	21.51	21.23	21.96	22.43
	6H	21.58	22.19	22.08	22.69	23.17	21.32	21.93	21.82	22.42	22.90
	8H	21.89	22.45	22.41	22.96	23.45	21.59	22.15	22.11	22.66	23.15
	12H	22.16	22.65	22.67	23.14	23.71	21.89	22.38	22.40	22.87	23.43
12H	4H	20.80	21.47	21.29	21.95	22.42	20.80	21.46	21.28	21.94	22.41
	6H	21.61	22.17	22.13	22.68	23.17	21.37	21.92	21.88	22.43	22.92
	8H	21.99	22.48	22.50	22.97	23.54	21.71	22.20	22.22	22.69	23.26