

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: P1059491

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059491
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D830-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

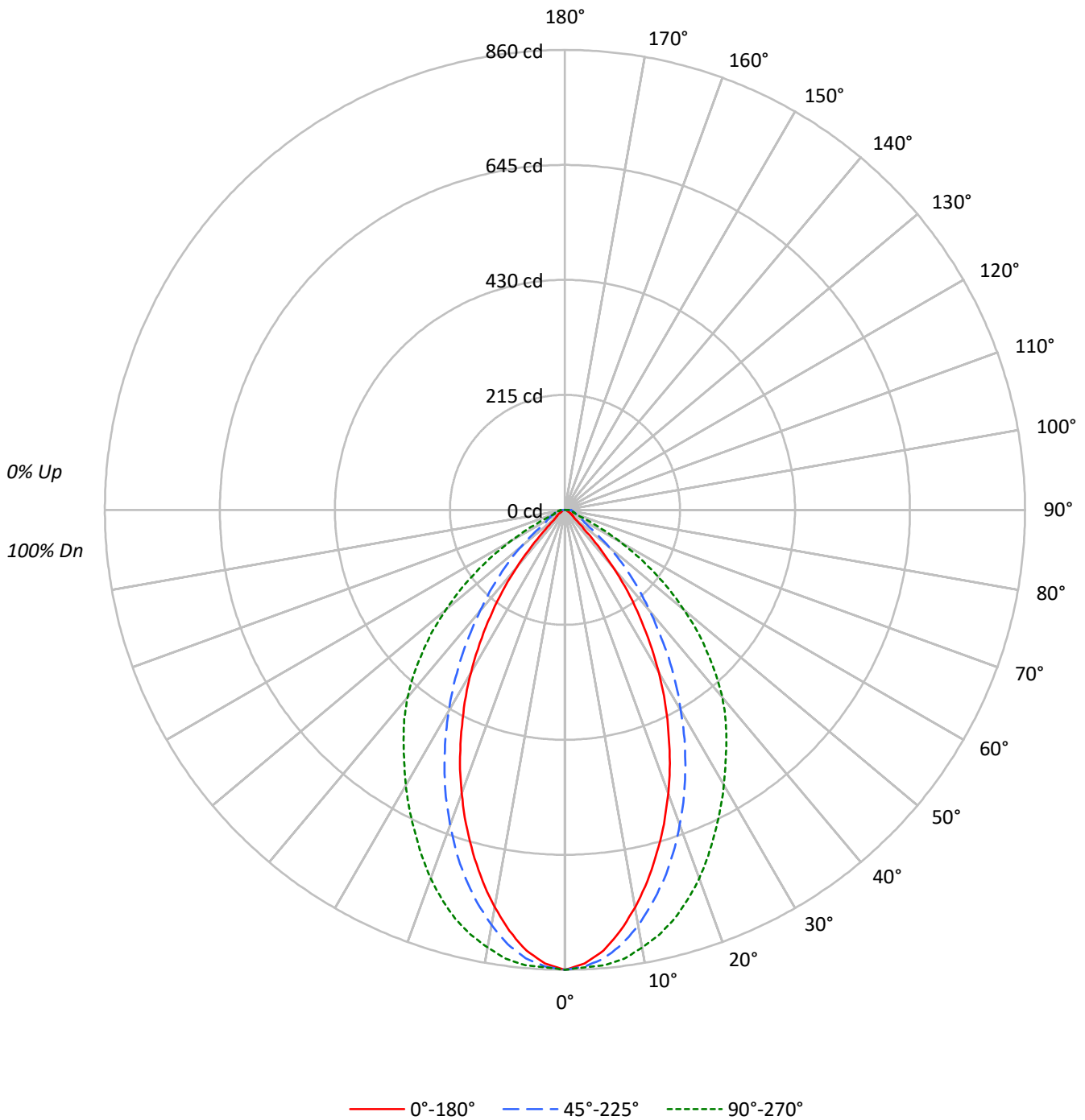
Lumens per Lamp: N/A
Luminaire Lumens: 1033.0 lumens
Efficiency: N/A
Efficacy: 28.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10098	10098	10098
5°	9749	9920	10075
10°	9000	9408	9908
15°	8072	8696	9623
20°	7049	7838	9168
25°	5929	6901	8603
30°	4761	5883	8059
35°	3488	4844	7540
40°	2157	3769	7014
45°	830	2838	6246
50°	409	1946	5285
55°	323	1077	4146
60°	216	895	2778
65°	183	803	1242
70°	182	721	721
75°	240	776	717
80°	358	981	798
85°	525	1590	1064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6246 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.8	7.6
10°-20°	201.9	19.5
20°-30°	250.5	24.3
30°-40°	224.5	21.7
40°-50°	147.5	14.3
50°-60°	73.9	7.2
60°-70°	29.2	2.8
70°-80°	16.4	1.6
80°-90°	10.3	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°	531.3	51.4
0°-40°	755.7	73.2
0°-60°	977.2	94.6
0°-90°	1033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	827	840	842	847	855	77
15°	664	685	715	764	792	185
25°	458	486	533	608	664	209
35°	243	276	338	442	526	151
45°	50	83	171	288	376	47
55°	16	18	53	142	202	14
65°	7	18	29	37	45	7
75°	5	17	17	16	16	6
85°	4	12	12	12	8	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	860.0	860.0	860.0	860.0	860.0
2.5°	849.5	861.3	854.7	854.7	856.0
5°	827.1	840.2	841.6	846.8	854.7
7.5°	794.2	811.3	819.2	835.0	846.8
10°	754.8	773.2	789.0	816.6	831.0
12.5°	711.4	729.8	753.5	791.6	814.0
15°	664.0	685.1	715.3	764.0	791.6
17.5°	615.4	636.4	673.3	728.5	764.0
20°	564.1	587.8	627.2	690.3	733.7
22.5°	512.8	539.1	581.2	649.6	699.6
25°	457.6	486.5	532.6	607.5	664.0
27.5°	405.0	435.2	483.9	565.4	629.9
30°	351.1	381.3	433.9	522.0	594.4
32.5°	295.9	330.1	385.3	481.3	558.9
35°	243.3	276.1	337.9	441.8	526.0
37.5°	192.0	224.9	289.3	403.7	493.1
40°	140.7	174.9	245.9	366.9	457.6
42.5°	92.0	127.5	207.8	330.1	418.2
45°	50.0	82.8	170.9	288.0	376.1
47.5°	27.6	44.7	138.1	248.5	335.3
50°	22.4	25.0	106.5	211.7	289.3
52.5°	18.4	21.0	76.3	176.2	247.2
55°	15.8	18.4	52.6	142.0	202.5
57.5°	13.1	15.8	42.1	109.1	159.1
60°	9.2	15.8	38.1	80.2	118.3
62.5°	7.9	15.8	32.9	55.2	78.9
65°	6.6	18.4	28.9	36.8	44.7
67.5°	5.3	18.4	25.0	23.7	23.7
70°	5.3	18.4	21.0	19.7	21.0
72.5°	5.3	19.7	19.7	18.4	18.4
75°	5.3	17.1	17.1	15.8	15.8
77.5°	5.3	15.8	15.8	14.5	14.5
80°	5.3	14.5	14.5	13.1	11.8
82.5°	5.3	13.1	13.1	11.8	10.5
85°	3.9	11.8	11.8	11.8	7.9
87.5°	3.9	10.5	11.8	10.5	6.6
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	0.50	1.75	0.86	2.07	2.38	14.58	15.84	14.94	16.15	16.46
	3H	3.02	4.14	3.40	4.47	4.83	14.66	15.77	15.04	16.10	16.47
	4H	4.19	5.23	4.60	5.58	5.96	14.72	15.76	15.12	16.11	16.49
	6H	5.25	6.20	5.67	6.57	6.97	14.82	15.77	15.23	16.14	16.54
	8H	5.79	6.69	6.22	7.08	7.49	14.88	15.78	15.31	16.17	16.58
	12H	6.27	7.13	6.70	7.51	7.94	14.95	15.81	15.38	16.19	16.62
4H	2H	3.75	4.79	4.15	5.14	5.52	14.44	15.47	14.84	15.83	16.21
	3H	6.21	7.06	6.63	7.46	7.87	14.61	15.46	15.03	15.86	16.27
	4H	7.56	8.32	8.00	8.74	9.18	14.74	15.50	15.18	15.92	16.36
	6H	8.70	9.35	9.16	9.80	10.27	14.96	15.61	15.42	16.06	16.53
	8H	9.21	9.82	9.68	10.27	10.74	15.08	15.69	15.55	16.14	16.61
	12H	9.66	10.20	10.15	10.69	11.16	15.24	15.78	15.73	16.26	16.74
8H	4H	8.48	9.09	8.95	9.54	10.01	14.74	15.36	15.21	15.80	16.27
	6H	10.08	10.58	10.59	11.08	11.56	15.07	15.57	15.58	16.07	16.55
	8H	10.91	11.36	11.43	11.87	12.37	15.30	15.75	15.82	16.27	16.76
	12H	11.68	12.08	12.20	12.58	13.15	15.63	16.02	16.14	16.52	17.09
12H	4H	8.65	9.19	9.13	9.67	10.15	14.73	15.27	15.22	15.76	16.23
	6H	10.40	10.85	10.92	11.37	11.86	15.10	15.56	15.63	16.07	16.56
	8H	11.40	11.80	11.92	12.30	12.87	15.41	15.81	15.93	16.31	16.88