

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: P1059563

Luminaire Tested: S123RDR-H1165D950-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059563
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-H1165D950-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: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

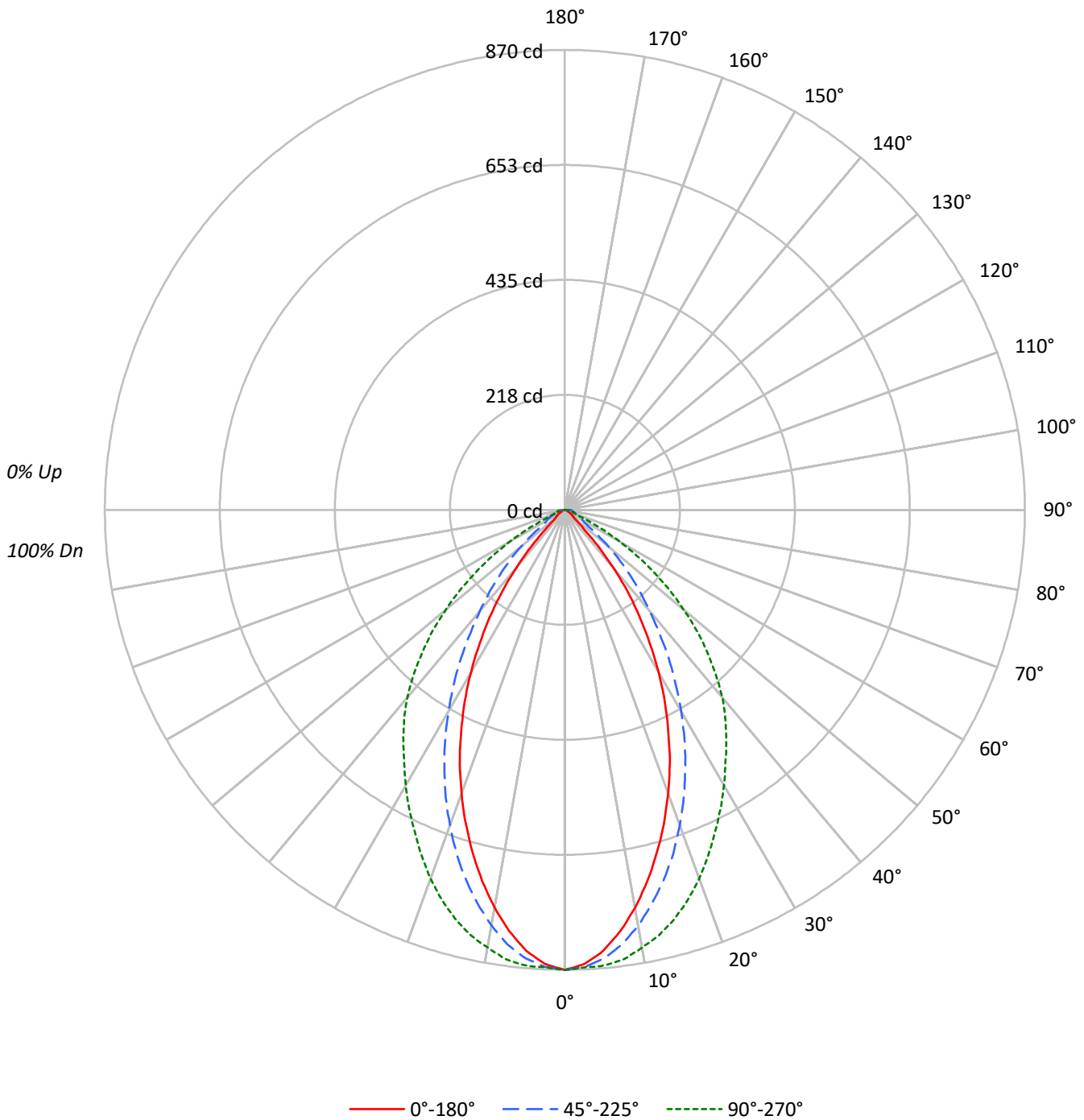
Lumens per Lamp: N/A
Luminaire Lumens: 1045.6 lumens
Efficiency: N/A
Efficacy: 28.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	10221	10221	10221
5°	9868	10040	10197
10°	9110	9522	10029
15°	8170	8801	9740
20°	7135	7934	9281
25°	6001	6983	8708
30°	4819	5955	8157
35°	3529	4903	7632
40°	2183	3815	7100
45°	840	2873	6320
50°	413	1969	5349
55°	328	1089	4197
60°	218	907	2813
65°	186	814	1259
70°	182	731	731
75°	240	785	726
80°	358	987	811
85°	539	1617	1078

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6320 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.8	7.6
10°-20°	204.3	19.5
20°-30°	253.6	24.3
30°-40°	227.2	21.7
40°-50°	149.3	14.3
50°-60°	74.8	7.2
60°-70°	29.6	2.8
70°-80°	16.5	1.6
80°-90°	10.4	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°	537.7	51.4
0°-40°	764.9	73.2
0°-60°	989.1	94.6
0°-90°	1045.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1045.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	870	870	870	870	870	
5°	837	850	852	857	865	78
15°	672	693	724	773	801	187
25°	463	492	539	615	672	212
35°	246	280	342	447	532	153
45°	51	84	173	292	381	48
55°	16	19	53	144	205	14
65°	7	19	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°	870.4	870.4	870.4	870.4	870.4
2.5°	859.8	871.8	865.1	865.1	866.4
5°	837.2	850.5	851.8	857.1	865.1
7.5°	803.9	821.2	829.2	845.1	857.1
10°	764.0	782.6	798.6	826.5	841.1
12.5°	720.0	738.7	762.6	801.2	823.8
15°	672.1	693.4	724.0	773.3	801.2
17.5°	622.9	644.2	681.4	737.3	773.3
20°	571.0	594.9	634.9	698.7	742.7
22.5°	519.1	545.7	588.3	657.5	708.1
25°	463.2	492.4	539.0	614.9	672.1
27.5°	409.9	440.5	489.8	572.3	637.5
30°	355.4	386.0	439.2	528.4	601.6
32.5°	299.5	334.1	390.0	487.1	565.6
35°	246.2	279.5	342.0	447.2	532.4
37.5°	194.3	227.6	292.8	408.6	499.1
40°	142.4	177.0	248.9	371.3	463.2
42.5°	93.2	129.1	210.3	334.1	423.2
45°	50.6	83.8	173.0	291.5	380.6
47.5°	27.9	45.3	139.7	251.5	339.4
50°	22.6	25.3	107.8	214.3	292.8
52.5°	18.6	21.3	77.2	178.3	250.2
55°	16.0	18.6	53.2	143.7	205.0
57.5°	13.3	16.0	42.6	110.5	161.0
60°	9.3	16.0	38.6	81.2	119.8
62.5°	8.0	16.0	33.3	55.9	79.9
65°	6.7	18.6	29.3	37.3	45.3
67.5°	5.3	18.6	25.3	24.0	24.0
70°	5.3	18.6	21.3	20.0	21.3
72.5°	5.3	20.0	20.0	18.6	18.6
75°	5.3	17.3	17.3	16.0	16.0
77.5°	5.3	16.0	16.0	14.6	14.6
80°	5.3	14.6	14.6	13.3	12.0
82.5°	5.3	13.3	13.3	12.0	10.6
85°	4.0	12.0	12.0	12.0	8.0
87.5°	4.0	10.6	12.0	10.6	6.7
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	0.54	1.80	0.91	2.11	2.43	14.62	15.88	14.99	16.19	16.51
	3H	3.05	4.17	3.43	4.50	4.86	14.70	15.82	15.08	16.15	16.51
	4H	4.22	5.25	4.62	5.61	5.99	14.77	15.80	15.17	16.15	16.54
	6H	5.27	6.22	5.68	6.59	6.98	14.86	15.81	15.28	16.19	16.58
	8H	5.80	6.70	6.24	7.10	7.50	14.92	15.82	15.35	16.21	16.62
	12H	6.29	7.15	6.72	7.53	7.96	14.99	15.85	15.43	16.24	16.67
4H	2H	3.80	4.84	4.21	5.19	5.57	14.48	15.52	14.89	15.87	16.25
	3H	6.26	7.10	6.67	7.51	7.91	14.66	15.50	15.07	15.91	16.31
	4H	7.60	8.36	8.04	8.78	9.22	14.79	15.54	15.22	15.96	16.41
	6H	8.73	9.39	9.20	9.83	10.30	15.00	15.65	15.47	16.10	16.57
	8H	9.24	9.85	9.71	10.30	10.77	15.13	15.74	15.60	16.18	16.66
	12H	9.70	10.24	10.18	10.72	11.19	15.29	15.82	15.77	16.31	16.78
8H	4H	8.52	9.13	8.99	9.58	10.05	14.79	15.40	15.26	15.85	16.32
	6H	10.12	10.62	10.62	11.11	11.60	15.12	15.62	15.62	16.12	16.60
	8H	10.94	11.39	11.46	11.91	12.40	15.35	15.80	15.87	16.31	16.81
	12H	11.72	12.12	12.24	12.62	13.19	15.67	16.07	16.19	16.57	17.14
12H	4H	8.69	9.23	9.17	9.71	10.19	14.78	15.32	15.27	15.80	16.28
	6H	10.43	10.88	10.95	11.40	11.89	15.15	15.60	15.67	16.12	16.61
	8H	11.44	11.84	11.95	12.33	12.91	15.46	15.86	15.97	16.35	16.93