

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: P1059550

Luminaire Tested: S123RDR-H1165D935-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D935-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

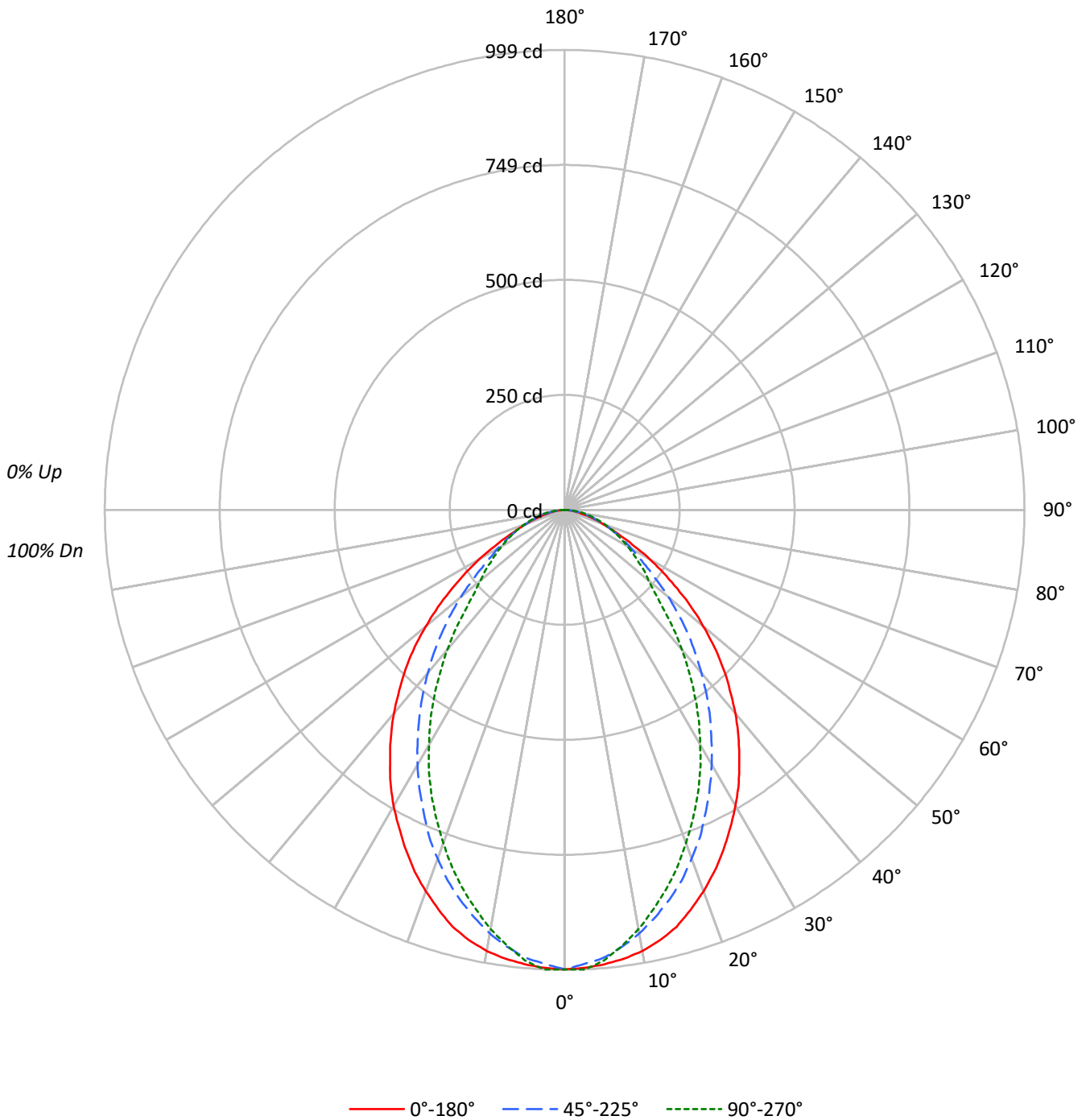
Lumens per Lamp: N/A
Luminaire Lumens: 1745.7 lumens
Efficiency: N/A
Efficacy: 47.8 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11720	11720	11720
5°	11680	11510	11581
10°	11600	11143	11028
15°	11404	10660	10368
20°	11018	10074	9624
25°	10570	9388	8860
30°	10069	8670	7986
35°	9475	7893	7069
40°	8845	7080	6087
45°	8109	6256	5000
50°	7188	5369	4339
55°	6115	4494	3978
60°	4986	3917	3692
65°	3801	3468	3434
70°	2966	3090	3214
75°	2395	2777	2994
80°	1785	2272	2759
85°	970	1455	2425

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8109 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	5.3
10°-20°	249.3	14.3
20°-30°	338.9	19.4
30°-40°	351.3	20.1
40°-50°	296.3	17.0
50°-60°	210.3	12.0
60°-70°	128.6	7.4
70°-80°	64.0	3.7
80°-90°	14.5	0.8
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°	680.8	39.0
0°-40°	1032.1	59.1
0°-60°	1538.7	88.1
0°-90°	1745.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1745.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	991	991	976	982	982	94
15°	938	920	877	861	853	263
25°	816	780	725	698	684	375
35°	661	611	551	512	493	413
45°	488	437	377	325	301	375
55°	299	268	220	200	194	268
65°	137	132	125	125	124	140
75°	53	56	61	64	66	57
85°	7	8	11	16	18	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	998.1	998.1	998.1	998.1	998.1
2.5°	995.7	996.9	987.3	998.1	999.3
5°	990.9	990.9	976.5	982.5	982.5
7.5°	983.7	981.3	957.3	957.3	954.9
10°	972.9	965.7	934.5	928.5	924.9
12.5°	957.3	945.3	906.9	896.1	888.9
15°	938.1	920.1	876.9	861.3	852.9
17.5°	910.5	892.5	844.6	823.0	813.4
20°	881.7	855.3	806.2	784.6	770.2
22.5°	850.6	817.0	769.0	742.6	727.0
25°	815.8	779.8	724.6	698.2	683.8
27.5°	778.6	739.0	682.6	652.6	638.2
30°	742.6	697.0	639.4	605.8	589.0
32.5°	704.2	652.6	593.8	559.0	542.2
35°	661.0	610.6	550.6	512.2	493.1
37.5°	620.2	568.6	506.3	465.5	443.9
40°	577.0	525.4	461.9	419.9	397.1
42.5°	531.4	482.3	419.9	370.7	349.1
45°	488.3	436.7	376.7	325.1	301.1
47.5°	441.5	393.5	334.7	281.9	265.1
50°	393.5	349.1	293.9	245.9	237.5
52.5°	346.7	309.5	253.1	221.9	218.3
55°	298.7	267.5	219.5	200.3	194.3
57.5°	254.3	231.5	188.3	178.7	176.3
60°	212.3	193.1	166.8	160.8	157.2
62.5°	171.5	160.8	145.2	142.8	140.4
65°	136.8	132.0	124.8	124.8	123.6
67.5°	108.0	108.0	106.8	109.2	108.0
70°	86.4	87.6	90.0	92.4	93.6
72.5°	68.4	72.0	74.4	78.0	79.2
75°	52.8	56.4	61.2	63.6	66.0
77.5°	38.4	42.0	46.8	50.4	52.8
80°	26.4	28.8	33.6	38.4	40.8
82.5°	16.8	18.0	21.6	26.4	28.8
85°	7.2	8.4	10.8	15.6	18.0
87.5°	0.0	0.0	1.2	4.8	8.4
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	17.36	18.81	17.72	19.12	19.44	15.46	16.91	15.82	17.22	17.53
	3H	18.26	19.55	18.64	19.88	20.24	17.03	18.33	17.41	18.65	19.02
	4H	18.54	19.75	18.94	20.10	20.48	17.63	18.84	18.03	19.19	19.57
	6H	18.69	19.81	19.10	20.18	20.57	18.08	19.19	18.49	19.56	19.96
	8H	18.71	19.78	19.14	20.17	20.57	18.23	19.29	18.65	19.68	20.08
	12H	18.71	19.72	19.14	20.11	20.54	18.33	19.34	18.76	19.72	20.15
4H	2H	17.60	18.82	18.00	19.17	19.55	16.00	17.21	16.40	17.56	17.94
	3H	18.72	19.72	19.13	20.12	20.52	17.77	18.77	18.18	19.17	19.58
	4H	19.11	20.01	19.54	20.42	20.86	18.48	19.38	18.92	19.80	20.24
	6H	19.35	20.13	19.81	20.57	21.03	19.06	19.84	19.52	20.28	20.74
	8H	19.39	20.12	19.86	20.57	21.03	19.25	19.98	19.71	20.42	20.89
	12H	19.40	20.05	19.89	20.53	21.00	19.39	20.03	19.87	20.51	20.99
8H	4H	19.27	19.99	19.73	20.44	20.91	18.69	19.42	19.16	19.87	20.34
	6H	19.58	20.18	20.08	20.67	21.15	19.37	19.97	19.87	20.46	20.94
	8H	19.66	20.19	20.17	20.70	21.19	19.63	20.16	20.14	20.68	21.17
	12H	19.69	20.16	20.20	20.66	21.22	19.84	20.31	20.35	20.80	21.37
12H	4H	19.27	19.92	19.75	20.40	20.87	18.69	19.34	19.18	19.82	20.29
	6H	19.59	20.13	20.11	20.64	21.13	19.38	19.92	19.90	20.43	20.92
	8H	19.71	20.18	20.22	20.68	21.24	19.68	20.16	20.19	20.65	21.22