

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: P1059541

Luminaire Tested: S123RDR-H1165D930-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059541
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-H1165D930-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

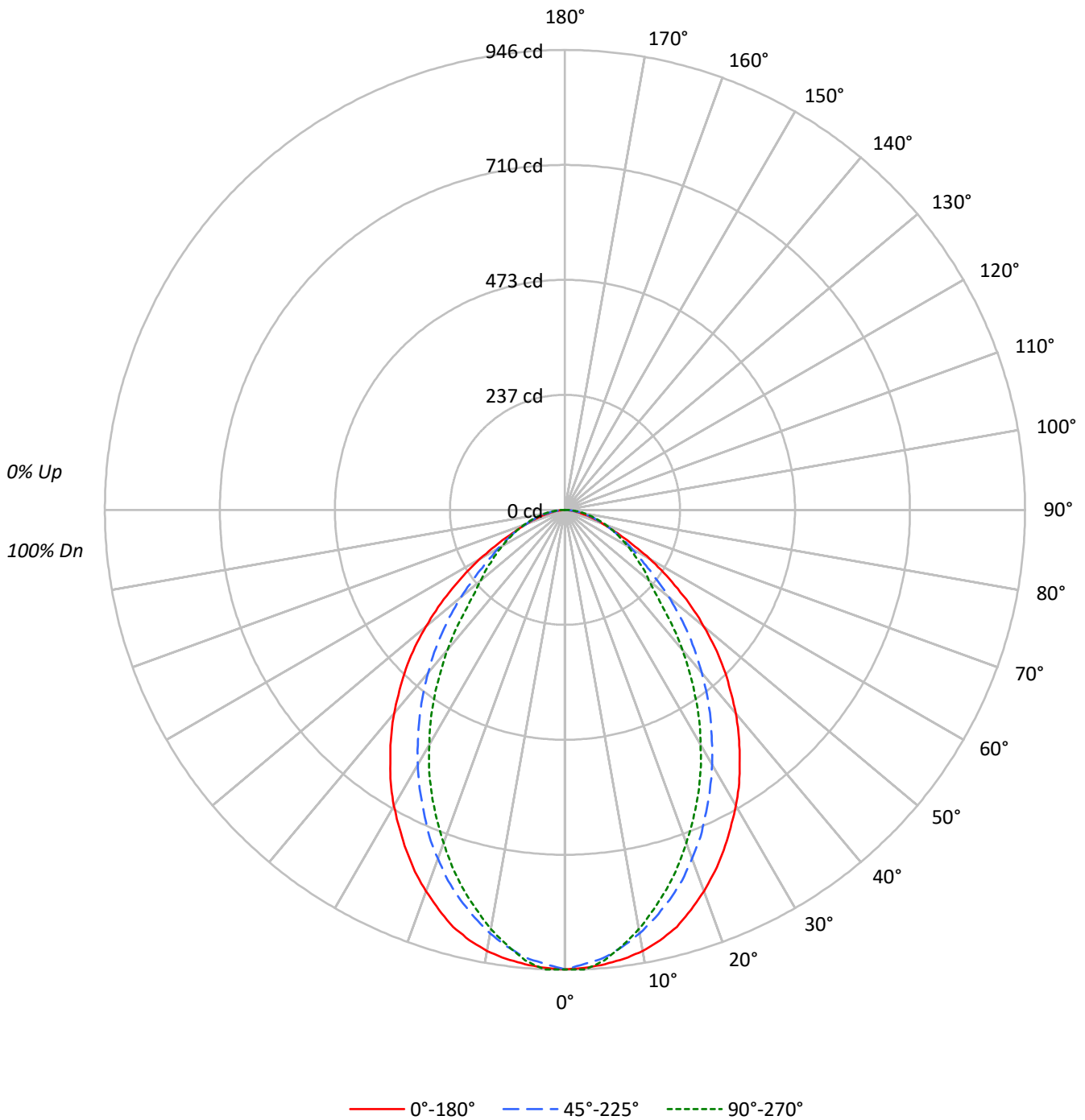
Lumens per Lamp: N/A
Luminaire Lumens: 1653.0 lumens
Efficiency: N/A
Efficacy: 45.3 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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°	11098	11098	11098
5°	11060	10900	10967
10°	10985	10551	10443
15°	10799	10095	9819
20°	10433	9539	9113
25°	10009	8889	8389
30°	9535	8210	7563
35°	8972	7474	6693
40°	8376	6703	5764
45°	7677	5923	4734
50°	6807	5084	4108
55°	5792	4256	3767
60°	4723	3708	3495
65°	3598	3281	3251
70°	2808	2925	3042
75°	2268	2627	2836
80°	1691	2150	2610
85°	916	1374	2290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7677 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	5.3
10°-20°	236.0	14.3
20°-30°	320.9	19.4
30°-40°	332.7	20.1
40°-50°	280.6	17.0
50°-60°	199.1	12.0
60°-70°	121.7	7.4
70°-80°	60.6	3.7
80°-90°	13.7	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°	644.7	39.0
0°-40°	977.3	59.1
0°-60°	1457.0	88.1
0°-90°	1653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1653.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	938	938	925	930	930	89
15°	888	871	830	816	808	249
25°	772	738	686	661	648	355
35°	626	578	521	485	467	391
45°	462	414	357	308	285	355
55°	283	253	208	190	184	254
65°	130	125	118	118	117	132
75°	50	53	58	60	62	54
85°	7	8	10	15	17	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	945.1	945.1	945.1	945.1	945.1
2.5°	942.9	944.0	934.9	945.1	946.3
5°	938.3	938.3	924.7	930.4	930.4
7.5°	931.5	929.2	906.5	906.5	904.2
10°	921.3	914.5	884.9	879.2	875.8
12.5°	906.5	895.1	858.8	848.6	841.8
15°	888.3	871.3	830.4	815.6	807.7
17.5°	862.2	845.2	799.7	779.3	770.2
20°	834.9	809.9	763.4	742.9	729.3
22.5°	805.4	773.6	728.2	703.2	688.4
25°	772.5	738.4	686.1	661.1	647.5
27.5°	737.2	699.8	646.4	618.0	604.3
30°	703.2	660.0	605.5	573.7	557.8
32.5°	666.8	618.0	562.3	529.4	513.5
35°	625.9	578.2	521.4	485.1	466.9
37.5°	587.3	538.5	479.4	440.8	420.3
40°	546.4	497.6	437.3	397.6	376.0
42.5°	503.2	456.7	397.6	351.0	330.6
45°	462.3	413.5	356.7	307.8	285.1
47.5°	418.0	372.6	316.9	267.0	251.1
50°	372.6	330.6	278.3	232.9	224.9
52.5°	328.3	293.1	239.7	210.2	206.7
55°	282.9	253.3	207.9	189.7	184.0
57.5°	240.8	219.2	178.3	169.3	167.0
60°	201.1	182.9	157.9	152.2	148.8
62.5°	162.4	152.2	137.5	135.2	132.9
65°	129.5	125.0	118.1	118.1	117.0
67.5°	102.2	102.2	101.1	103.4	102.2
70°	81.8	82.9	85.2	87.5	88.6
72.5°	64.8	68.2	70.4	73.8	75.0
75°	50.0	53.4	57.9	60.2	62.5
77.5°	36.4	39.8	44.3	47.7	50.0
80°	25.0	27.3	31.8	36.4	38.6
82.5°	15.9	17.0	20.4	25.0	27.3
85°	6.8	8.0	10.2	14.8	17.0
87.5°	0.0	0.0	1.1	4.5	8.0
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	17.17	18.62	17.54	18.93	19.25	15.27	16.72	15.63	17.03	17.35
	3H	18.07	19.36	18.45	19.69	20.05	16.84	18.14	17.22	18.47	18.83
	4H	18.35	19.56	18.75	19.91	20.29	17.44	18.65	17.84	19.00	19.38
	6H	18.50	19.62	18.91	19.99	20.38	17.89	19.01	18.30	19.37	19.77
	8H	18.52	19.59	18.95	19.98	20.38	18.04	19.10	18.47	19.49	19.89
	12H	18.52	19.53	18.95	19.92	20.34	18.14	19.15	18.57	19.53	19.96
4H	2H	17.41	18.63	17.81	18.98	19.36	15.81	17.02	16.21	17.37	17.75
	3H	18.53	19.53	18.94	19.93	20.33	17.58	18.58	17.99	18.99	19.39
	4H	18.92	19.82	19.35	20.23	20.67	18.30	19.19	18.73	19.61	20.05
	6H	19.16	19.94	19.62	20.38	20.84	18.87	19.65	19.33	20.09	20.55
	8H	19.20	19.93	19.67	20.38	20.84	19.06	19.79	19.52	20.23	20.70
	12H	19.21	19.86	19.69	20.34	20.81	19.20	19.84	19.68	20.32	20.80
8H	4H	19.08	19.80	19.54	20.25	20.72	18.50	19.23	18.97	19.68	20.15
	6H	19.39	19.99	19.89	20.48	20.96	19.18	19.78	19.68	20.27	20.75
	8H	19.46	20.00	19.98	20.51	21.00	19.44	19.97	19.95	20.49	20.98
	12H	19.50	19.97	20.01	20.47	21.03	19.65	20.12	20.16	20.61	21.18
12H	4H	19.08	19.73	19.56	20.21	20.68	18.50	19.15	18.99	19.63	20.10
	6H	19.40	19.94	19.92	20.45	20.94	19.19	19.73	19.71	20.24	20.73
	8H	19.52	19.99	20.03	20.48	21.05	19.49	19.97	20.00	20.46	21.03