

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: P1059532

Luminaire Tested: S123RDR-H1165D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059532  
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-H1165D927-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: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

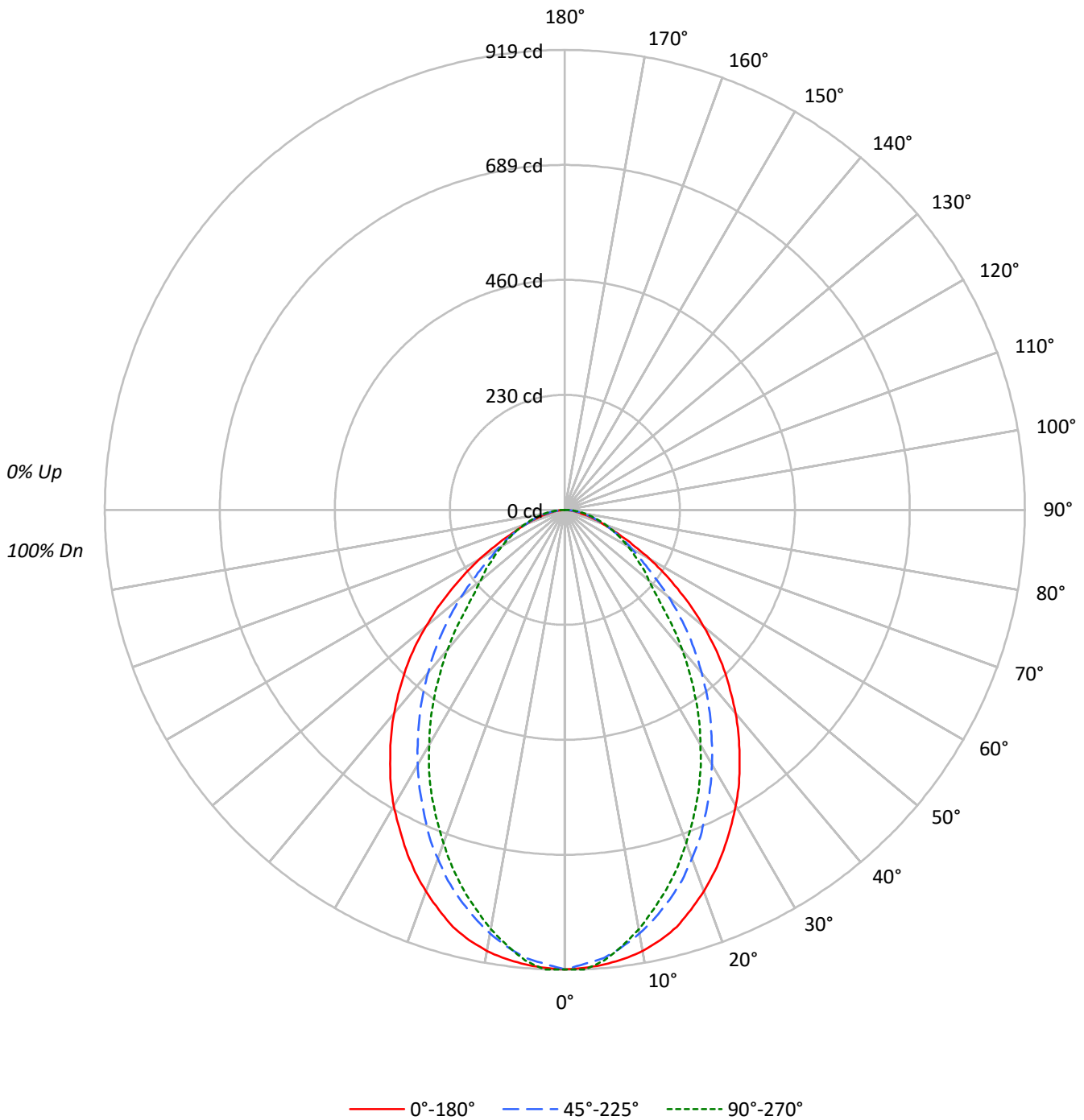
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1606.1 lumens  
Efficiency: N/A  
Efficacy: 44.0 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°	10783	10783	10783
5°	10746	10591	10656
10°	10674	10252	10147
15°	10492	9809	9541
20°	10138	9268	8855
25°	9725	8638	8151
30°	9264	7977	7348
35°	8718	7262	6502
40°	8138	6513	5600
45°	7460	5756	4600
50°	6613	4940	3992
55°	5626	4135	3660
60°	4589	3603	3396
65°	3495	3190	3159
70°	2729	2843	2956
75°	2205	2554	2754
80°	1643	2090	2536
85°	889	1334	2237

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7460 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.2	5.3
10°-20°	229.3	14.3
20°-30°	311.8	19.4
30°-40°	323.2	20.1
40°-50°	272.6	17.0
50°-60°	193.5	12.0
60°-70°	118.3	7.4
70°-80°	58.8	3.7
80°-90°	13.4	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°	626.4	39.0
0°-40°	949.6	59.1
0°-60°	1415.7	88.1
0°-90°	1606.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1606.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	918	918	918	918	918	
5°	912	912	898	904	904	87
15°	863	847	807	792	785	242
25°	751	717	667	642	629	345
35°	608	562	507	471	454	380
45°	449	402	347	299	277	345
55°	275	246	202	184	179	247
65°	126	121	115	115	114	128
75°	49	52	56	58	61	52
85°	7	8	10	14	17	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	918.3	918.3	918.3	918.3	918.3
2.5°	916.1	917.2	908.4	918.3	919.4
5°	911.7	911.7	898.5	904.0	904.0
7.5°	905.1	902.9	880.8	880.8	878.6
10°	895.2	888.5	859.8	854.3	851.0
12.5°	880.8	869.8	834.4	824.5	817.9
15°	863.1	846.6	806.9	792.5	784.8
17.5°	837.8	821.2	777.0	757.2	748.4
20°	811.3	787.0	741.7	721.9	708.6
22.5°	782.6	751.7	707.5	683.2	668.9
25°	750.6	717.4	666.7	642.4	629.1
27.5°	716.3	679.9	628.0	600.4	587.2
30°	683.2	641.3	588.3	557.4	541.9
32.5°	647.9	600.4	546.4	514.4	498.9
35°	608.2	561.8	506.6	471.3	453.6
37.5°	570.6	523.2	465.8	428.3	408.4
40°	530.9	483.4	424.9	386.3	365.3
42.5°	489.0	443.7	386.3	341.1	321.2
45°	449.2	401.8	346.6	299.1	277.0
47.5°	406.2	362.0	308.0	259.4	243.9
50°	362.0	321.2	270.4	226.3	218.5
52.5°	319.0	284.8	232.9	204.2	200.9
55°	274.8	246.1	202.0	184.3	178.8
57.5°	234.0	213.0	173.3	164.5	162.3
60°	195.4	177.7	153.4	147.9	144.6
62.5°	157.8	147.9	133.6	131.3	129.1
65°	125.8	121.4	114.8	114.8	113.7
67.5°	99.3	99.3	98.2	100.4	99.3
70°	79.5	80.6	82.8	85.0	86.1
72.5°	62.9	66.2	68.4	71.7	72.8
75°	48.6	51.9	56.3	58.5	60.7
77.5°	35.3	38.6	43.0	46.4	48.6
80°	24.3	26.5	30.9	35.3	37.5
82.5°	15.5	16.6	19.9	24.3	26.5
85°	6.6	7.7	9.9	14.3	16.6
87.5°	0.0	0.0	1.1	4.4	7.7
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	17.07	18.52	17.44	18.83	19.15	15.17	16.62	15.53	16.93	17.25
	3H	17.97	19.26	18.35	19.59	19.95	16.74	18.04	17.12	18.37	18.73
	4H	18.25	19.46	18.65	19.81	20.19	17.34	18.55	17.74	18.90	19.28
	6H	18.40	19.52	18.81	19.89	20.28	17.79	18.91	18.20	19.27	19.67
	8H	18.42	19.49	18.85	19.88	20.28	17.94	19.00	18.36	19.39	19.79
	12H	18.42	19.43	18.85	19.82	20.25	18.04	19.05	18.47	19.43	19.86
4H	2H	17.31	18.53	17.72	18.88	19.26	15.71	16.92	16.11	17.27	17.65
	3H	18.43	19.43	18.84	19.83	20.23	17.48	18.48	17.89	18.89	19.29
	4H	18.82	19.72	19.25	20.13	20.57	18.19	19.09	18.63	19.51	19.95
	6H	19.06	19.84	19.52	20.28	20.74	18.77	19.55	19.23	19.99	20.45
	8H	19.10	19.83	19.57	20.28	20.74	18.96	19.69	19.42	20.13	20.60
	12H	19.11	19.76	19.60	20.24	20.71	19.10	19.74	19.58	20.22	20.70
8H	4H	18.98	19.70	19.44	20.15	20.62	18.40	19.13	18.87	19.58	20.05
	6H	19.29	19.89	19.79	20.38	20.86	19.08	19.68	19.58	20.17	20.65
	8H	19.37	19.90	19.88	20.41	20.90	19.34	19.87	19.85	20.39	20.88
	12H	19.40	19.87	19.91	20.37	20.93	19.55	20.02	20.06	20.51	21.08
12H	4H	18.98	19.63	19.46	20.11	20.58	18.40	19.05	18.89	19.53	20.00
	6H	19.30	19.84	19.82	20.35	20.84	19.09	19.63	19.61	20.14	20.63
	8H	19.42	19.89	19.93	20.39	20.95	19.39	19.87	19.90	20.36	20.93