

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: P1059564

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059564  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
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-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

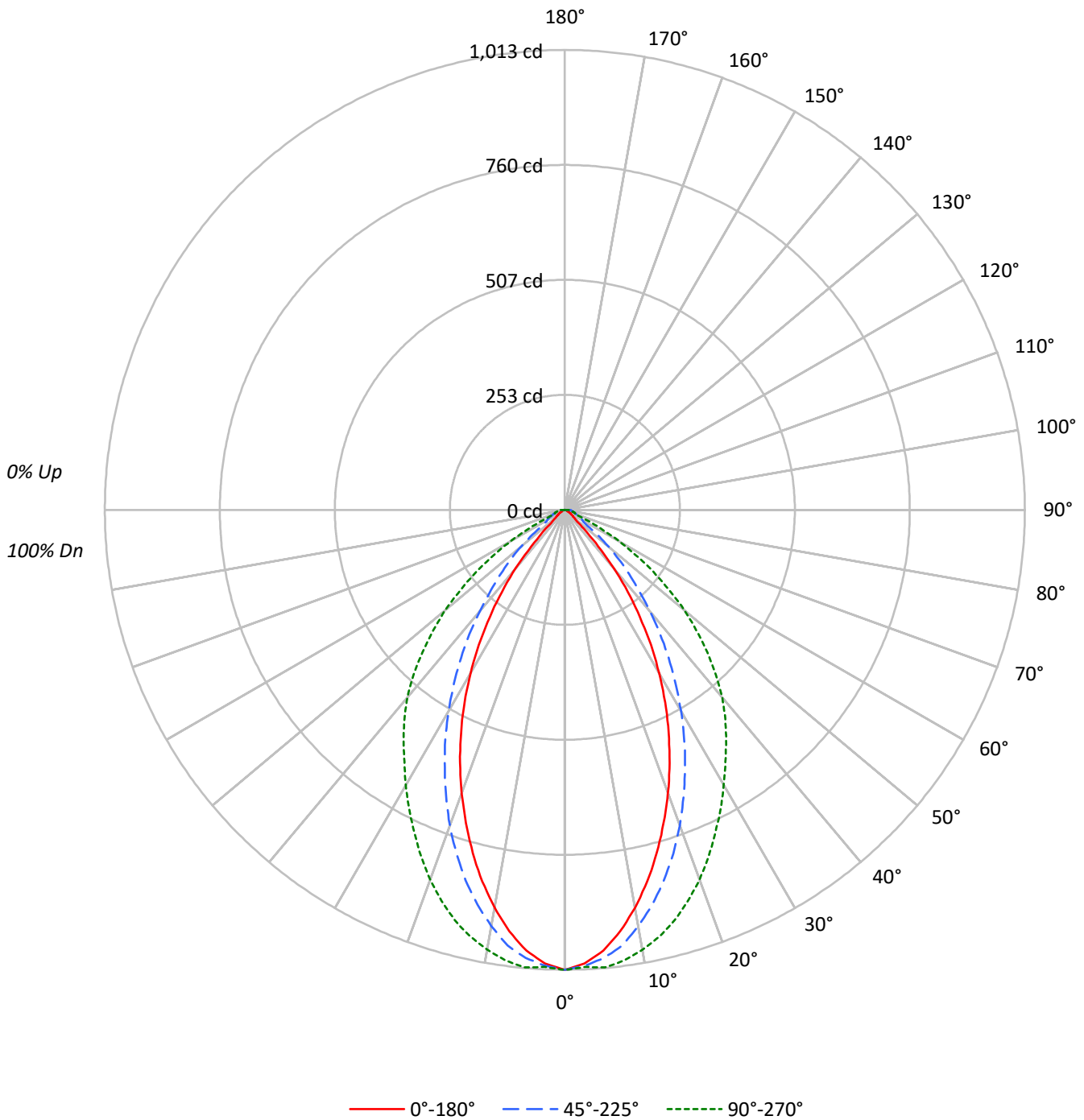
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1216.4 lumens  
Efficiency: N/A  
Efficacy: 33.3 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	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	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	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	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
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	42	40

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11896	11896	11896
5°	11487	11675	11926
10°	10604	11096	11730
15°	9516	10260	11377
20°	8301	9250	10830
25°	7003	8107	10159
30°	5632	6931	9495
35°	4123	5707	8875
40°	2571	4448	8265
45°	973	3316	7362
50°	462	2285	6275
55°	354	1253	4852
60°	251	1064	3189
65°	186	925	1331
70°	182	869	869
75°	240	907	907
80°	358	1082	987
85°	714	1792	1442

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7362 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.0	7.6
10°-20°	238.5	19.6
20°-30°	295.2	24.3
30°-40°	264.6	21.8
40°-50°	173.5	14.3
50°-60°	86.8	7.1
60°-70°	33.9	2.8
70°-80°	19.1	1.6
80°-90°	11.8	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°	626.7	51.5
0°-40°	891.3	73.3
0°-60°	1151.7	94.7
0°-90°	1216.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1216.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1013	1013	1013	1013	1013	
5°	974	990	990	1001	1012	90
15°	783	815	844	900	936	218
25°	540	574	626	715	784	247
35°	288	326	398	518	619	179
45°	59	94	200	342	443	56
55°	17	21	61	168	237	16
65°	7	20	33	44	48	7
75°	5	20	20	20	20	6
85°	5	13	13	13	11	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1013.1	1013.1	1013.1	1013.1	1013.1
2.5°	999.8	1014.5	1005.1	1006.5	1007.8
5°	974.5	990.5	990.5	1001.1	1011.8
7.5°	935.9	954.5	967.9	986.5	1001.1
10°	889.3	911.9	930.6	963.9	983.8
12.5°	838.7	866.7	890.6	934.6	962.5
15°	782.8	814.8	844.0	900.0	935.9
17.5°	722.9	754.8	793.5	858.7	902.6
20°	664.3	696.3	740.2	813.4	866.7
22.5°	603.1	636.4	683.0	764.2	826.7
25°	540.5	573.8	625.7	714.9	784.1
27.5°	477.9	511.2	569.8	667.0	742.9
30°	415.4	448.6	511.2	615.1	700.3
32.5°	352.8	388.7	454.0	567.1	657.7
35°	287.6	326.2	398.1	517.9	619.1
37.5°	227.7	263.6	344.8	475.3	580.4
40°	167.7	206.4	290.2	434.0	539.2
42.5°	109.2	150.4	241.0	388.7	492.6
45°	58.6	94.5	199.7	342.1	443.3
47.5°	32.0	51.9	161.1	292.9	392.7
50°	25.3	29.3	125.1	250.3	343.5
52.5°	21.3	24.0	89.2	210.3	288.9
55°	17.3	21.3	61.2	167.7	237.0
57.5°	14.6	18.6	47.9	130.5	185.1
60°	10.7	16.0	45.3	95.9	135.8
62.5°	8.0	17.3	39.9	66.6	89.2
65°	6.7	20.0	33.3	43.9	47.9
67.5°	5.3	21.3	29.3	28.0	28.0
70°	5.3	20.0	25.3	24.0	25.3
72.5°	5.3	21.3	22.6	21.3	22.6
75°	5.3	20.0	20.0	20.0	20.0
77.5°	5.3	18.6	18.6	17.3	17.3
80°	5.3	16.0	16.0	16.0	14.6
82.5°	5.3	14.6	14.6	14.6	12.0
85°	5.3	13.3	13.3	13.3	10.7
87.5°	4.0	12.0	13.3	12.0	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	0.95	2.20	1.31	2.51	2.83	15.21	16.47	15.57	16.78	17.09
	3H	3.28	4.39	3.66	4.73	5.09	15.29	16.40	15.67	16.73	17.10
	4H	4.39	5.42	4.79	5.77	6.16	15.37	16.40	15.77	16.75	17.14
	6H	5.38	6.32	5.79	6.70	7.09	15.47	16.42	15.89	16.79	17.19
	8H	5.86	6.75	6.29	7.14	7.55	15.53	16.43	15.96	16.82	17.22
	12H	6.41	7.27	6.84	7.65	8.08	15.61	16.47	16.04	16.85	17.28
4H	2H	4.21	5.24	4.61	5.59	5.98	15.06	16.10	15.47	16.45	16.83
	3H	6.53	7.37	6.94	7.78	8.18	15.24	16.09	15.65	16.49	16.89
	4H	7.90	8.65	8.33	9.07	9.52	15.39	16.15	15.83	16.57	17.01
	6H	8.98	9.63	9.45	10.08	10.55	15.62	16.27	16.08	16.72	17.18
	8H	9.44	10.05	9.91	10.49	10.97	15.74	16.35	16.21	16.80	17.27
	12H	9.93	10.47	10.42	10.95	11.43	15.92	16.45	16.40	16.94	17.41
8H	4H	8.87	9.48	9.34	9.93	10.40	15.39	16.00	15.86	16.45	16.92
	6H	10.39	10.89	10.90	11.39	11.87	15.73	16.22	16.23	16.72	17.20
	8H	11.16	11.61	11.69	12.13	12.62	15.96	16.41	16.48	16.92	17.42
	12H	11.96	12.36	12.48	12.86	13.43	16.29	16.69	16.81	17.19	17.76
12H	4H	9.05	9.59	9.54	10.07	10.55	15.37	15.91	15.86	16.40	16.87
	6H	10.71	11.16	11.23	11.67	12.17	15.74	16.19	16.27	16.71	17.20
	8H	11.66	12.06	12.17	12.55	13.12	16.05	16.45	16.57	16.95	17.52