

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: P1059775

Luminaire Tested: S123RDR-H775D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059775  
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-H775D927-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: -

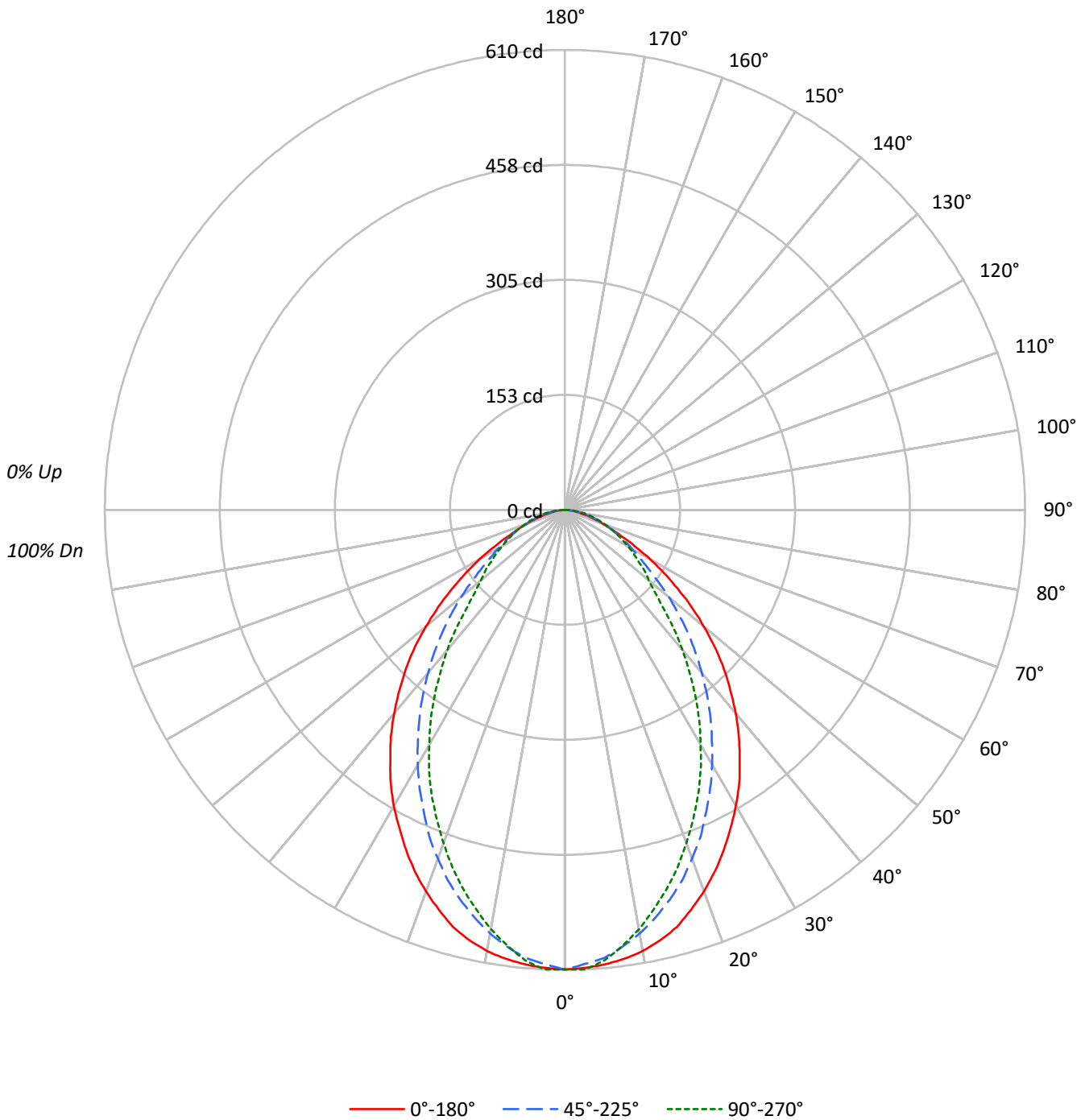
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1066.1 lumens  
Efficiency: N/A  
Efficacy: 45.4 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): 23.5  
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									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	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°	7158	7158	7158
5°	7134	7030	7072
10°	7085	6805	6736
15°	6965	6511	6332
20°	6729	6152	5878
25°	6455	5733	5411
30°	6149	5295	4877
35°	5787	4821	4316
40°	5402	4324	3717
45°	4952	3821	3054
50°	4390	3279	2651
55°	3734	2745	2430
60°	3046	2391	2255
65°	2320	2117	2098
70°	1813	1885	1960
75°	1461	1697	1828
80°	1089	1386	1684
85°	593	889	1482

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4952 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.6	5.3
10°-20°	152.2	14.3
20°-30°	207.0	19.4
30°-40°	214.5	20.1
40°-50°	180.9	17.0
50°-60°	128.4	12.0
60°-70°	78.5	7.4
70°-80°	39.1	3.7
80°-90°	8.9	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°	415.8	39.0
0°-40°	630.3	59.1
0°-60°	939.7	88.1
0°-90°	1066.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1066.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	610	610	610	610	610	
5°	605	605	596	600	600	57
15°	573	562	536	526	521	161
25°	498	476	442	426	418	229
35°	404	373	336	313	301	252
45°	298	267	230	198	184	229
55°	182	163	134	122	119	164
65°	84	81	76	76	76	85
75°	32	34	37	39	40	35
85°	4	5	7	10	11	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	609.6	609.6	609.6	609.6	609.6
2.5°	608.1	608.8	603.0	609.6	610.3
5°	605.2	605.2	596.4	600.0	600.0
7.5°	600.8	599.3	584.7	584.7	583.2
10°	594.2	589.8	570.7	567.1	564.9
12.5°	584.7	577.3	553.9	547.3	542.9
15°	572.9	561.9	535.6	526.0	520.9
17.5°	556.1	545.1	515.8	502.6	496.7
20°	538.5	522.4	492.3	479.2	470.4
22.5°	519.4	498.9	469.6	453.5	444.0
25°	498.2	476.2	442.5	426.4	417.6
27.5°	475.5	451.3	416.9	398.6	389.8
30°	453.5	425.7	390.5	370.0	359.7
32.5°	430.1	398.6	362.7	341.4	331.2
35°	403.7	372.9	336.3	312.8	301.1
37.5°	378.8	347.3	309.2	284.3	271.1
40°	352.4	320.9	282.1	256.4	242.5
42.5°	324.6	294.5	256.4	226.4	213.2
45°	298.2	266.7	230.1	198.5	183.9
47.5°	269.6	240.3	204.4	172.2	161.9
50°	240.3	213.2	179.5	150.2	145.1
52.5°	211.7	189.0	154.6	135.5	133.3
55°	182.4	163.4	134.1	122.4	118.7
57.5°	155.3	141.4	115.0	109.2	107.7
60°	129.7	118.0	101.8	98.2	96.0
62.5°	104.8	98.2	88.7	87.2	85.7
65°	83.5	80.6	76.2	76.2	75.5
67.5°	65.9	65.9	65.2	66.7	65.9
70°	52.8	53.5	54.9	56.4	57.1
72.5°	41.8	44.0	45.4	47.6	48.4
75°	32.2	34.4	37.4	38.8	40.3
77.5°	23.4	25.6	28.6	30.8	32.2
80°	16.1	17.6	20.5	23.4	24.9
82.5°	10.3	11.0	13.2	16.1	17.6
85°	4.4	5.1	6.6	9.5	11.0
87.5°	0.0	0.0	0.7	2.9	5.1
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	15.65	17.10	16.01	17.41	17.73	13.75	15.20	14.11	15.51	15.82
	3H	16.54	17.84	16.92	18.17	18.53	15.32	16.61	15.70	16.94	17.30
	4H	16.83	18.04	17.23	18.39	18.77	15.91	17.13	16.31	17.47	17.85
	6H	16.98	18.09	17.39	18.46	18.85	16.36	17.48	16.78	17.85	18.24
	8H	17.00	18.06	17.43	18.45	18.85	16.51	17.57	16.94	17.96	18.37
	12H	16.99	18.01	17.42	18.39	18.82	16.61	17.63	17.04	18.01	18.44
4H	2H	15.89	17.10	16.29	17.45	17.83	14.29	15.50	14.69	15.85	16.23
	3H	17.00	18.01	17.42	18.41	18.81	16.06	17.06	16.47	17.46	17.86
	4H	17.39	18.29	17.83	18.71	19.15	16.77	17.67	17.20	18.09	18.53
	6H	17.63	18.41	18.09	18.86	19.32	17.34	18.12	17.80	18.56	19.03
	8H	17.68	18.41	18.14	18.85	19.32	17.53	18.26	18.00	18.71	19.17
	12H	17.69	18.33	18.17	18.81	19.29	17.67	18.32	18.16	18.80	19.27
8H	4H	17.55	18.28	18.02	18.72	19.19	16.98	17.71	17.45	18.15	18.62
	6H	17.86	18.46	18.36	18.96	19.43	17.66	18.25	18.15	18.75	19.23
	8H	17.94	18.48	18.46	18.99	19.48	17.91	18.45	18.43	18.96	19.45
	12H	17.98	18.45	18.49	18.94	19.51	18.12	18.59	18.63	19.09	19.66
12H	4H	17.56	18.20	18.04	18.68	19.16	16.98	17.63	17.46	18.11	18.58
	6H	17.88	18.42	18.39	18.93	19.42	17.66	18.20	18.18	18.71	19.20
	8H	17.99	18.47	18.50	18.96	19.53	17.97	18.44	18.48	18.93	19.50