

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: P1059735

Luminaire Tested: S123RDR-H775D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059735
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-H775D830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

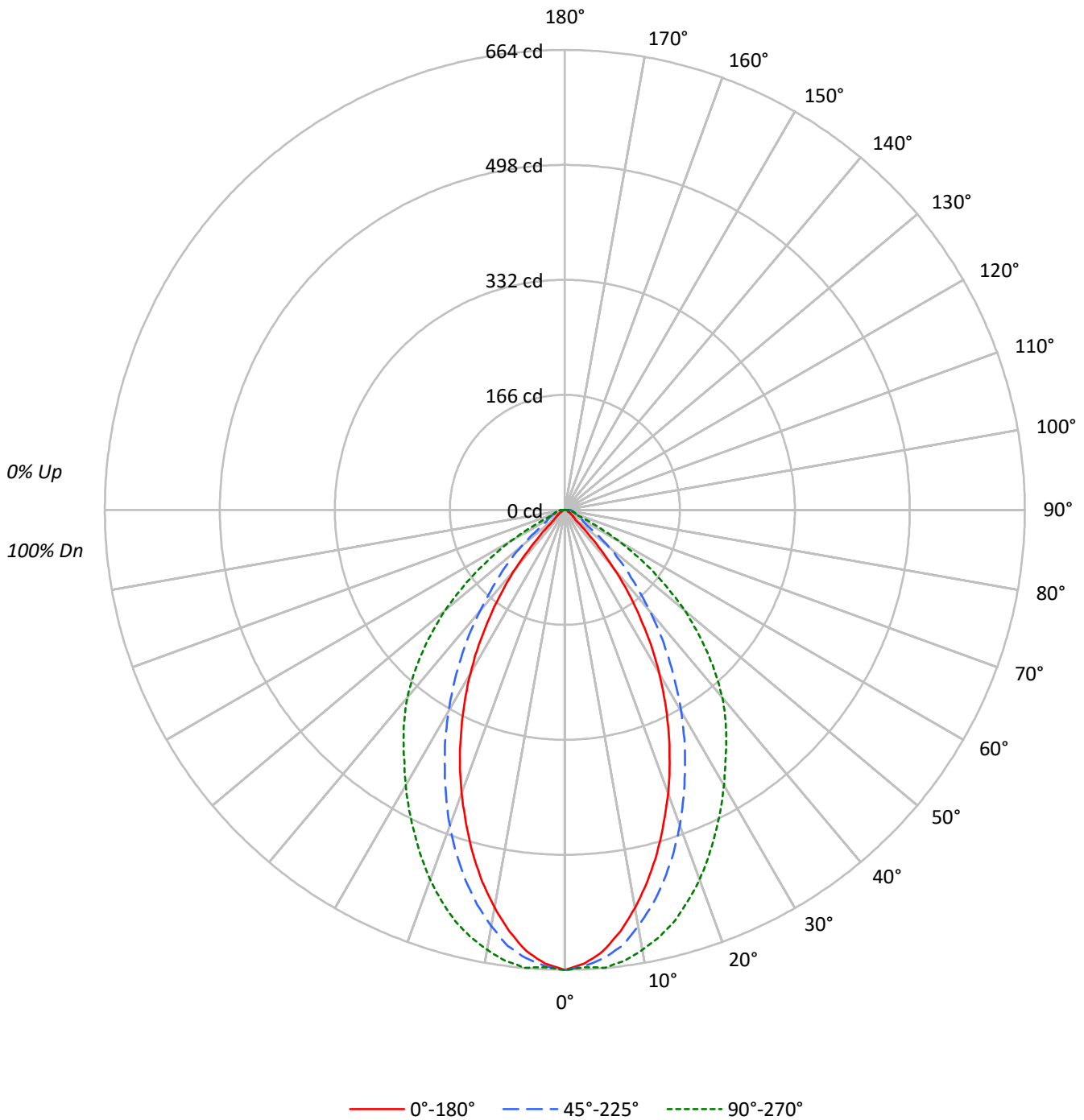
Lumens per Lamp: N/A
Luminaire Lumens: 797.7 lumens
Efficiency: N/A
Efficacy: 33.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	
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	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°	7802	7802	7802
5°	7533	7657	7821
10°	6954	7277	7693
15°	6241	6729	7462
20°	5445	6066	7103
25°	4593	5316	6662
30°	3693	4546	6226
35°	2704	3741	5820
40°	1686	2917	5420
45°	638	2175	4827
50°	303	1500	4116
55°	231	823	3181
60°	164	698	2093
65°	122	606	872
70°	120	570	570
75°	159	594	594
80°	237	710	649
85°	472	1172	943

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4827 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.0	7.6
10°-20°	156.4	19.6
20°-30°	193.6	24.3
30°-40°	173.5	21.8
40°-50°	113.8	14.3
50°-60°	57.0	7.1
60°-70°	22.2	2.8
70°-80°	12.5	1.6
80°-90°	7.7	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°	411.0	51.5
0°-40°	584.5	73.3
0°-60°	755.3	94.7
0°-90°	797.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	797.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	639	650	650	657	664	59
15°	513	534	554	590	614	143
25°	354	376	410	469	514	162
35°	189	214	261	340	406	117
45°	38	62	131	224	291	37
55°	11	14	40	110	155	10
65°	4	13	22	29	31	5
75°	4	13	13	13	13	4
85°	4	9	9	9	7	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	664.4	664.4	664.4	664.4	664.4
2.5°	655.7	665.3	659.2	660.0	660.9
5°	639.1	649.6	649.6	656.6	663.5
7.5°	613.8	626.0	634.7	646.9	656.6
10°	583.2	598.1	610.3	632.1	645.2
12.5°	550.0	568.4	584.1	612.9	631.2
15°	513.4	534.3	553.5	590.2	613.8
17.5°	474.1	495.0	520.4	563.1	591.9
20°	435.7	456.6	485.4	533.4	568.4
22.5°	395.5	417.3	447.9	501.1	542.2
25°	354.5	376.3	410.3	468.8	514.2
27.5°	313.4	335.3	373.7	437.4	487.2
30°	272.4	294.2	335.3	403.4	459.2
32.5°	231.4	254.9	297.7	371.9	431.3
35°	188.6	213.9	261.0	339.6	406.0
37.5°	149.3	172.9	226.1	311.7	380.7
40°	110.0	135.3	190.3	284.6	353.6
42.5°	71.6	98.7	158.0	254.9	323.0
45°	38.4	62.0	131.0	224.4	290.7
47.5°	21.0	34.0	105.6	192.1	257.6
50°	16.6	19.2	82.1	164.1	225.3
52.5°	14.0	15.7	58.5	137.9	189.5
55°	11.3	14.0	40.2	110.0	155.4
57.5°	9.6	12.2	31.4	85.6	121.4
60°	7.0	10.5	29.7	62.9	89.1
62.5°	5.2	11.3	26.2	43.7	58.5
65°	4.4	13.1	21.8	28.8	31.4
67.5°	3.5	14.0	19.2	18.3	18.3
70°	3.5	13.1	16.6	15.7	16.6
72.5°	3.5	14.0	14.8	14.0	14.8
75°	3.5	13.1	13.1	13.1	13.1
77.5°	3.5	12.2	12.2	11.3	11.3
80°	3.5	10.5	10.5	10.5	9.6
82.5°	3.5	9.6	9.6	9.6	7.9
85°	3.5	8.7	8.7	8.7	7.0
87.5°	2.6	7.9	8.7	7.9	5.2
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	0.00	0.74	0.00	1.05	1.37	13.75	15.00	14.11	15.31	15.63
	3H	1.83	2.94	2.21	3.27	3.63	13.83	14.94	14.21	15.27	15.63
	4H	2.93	3.97	3.34	4.32	4.70	13.90	14.94	14.31	15.29	15.67
	6H	3.92	4.87	4.34	5.24	5.64	14.00	14.95	14.42	15.33	15.72
	8H	4.41	5.30	4.84	5.70	6.10	14.06	14.96	14.50	15.35	15.76
	12H	4.96	5.82	5.40	6.21	6.64	14.15	15.00	14.58	15.39	15.82
4H	2H	2.74	3.77	3.14	4.12	4.51	13.60	14.63	14.00	14.98	15.37
	3H	5.06	5.91	5.47	6.31	6.71	13.77	14.62	14.19	15.02	15.43
	4H	6.43	7.19	6.87	7.61	8.05	13.93	14.68	14.36	15.10	15.55
	6H	7.52	8.17	7.98	8.62	9.09	14.15	14.80	14.61	15.25	15.72
	8H	7.98	8.59	8.45	9.04	9.51	14.27	14.88	14.74	15.33	15.80
	12H	8.47	9.01	8.96	9.49	9.97	14.45	14.99	14.94	15.47	15.95
8H	4H	7.41	8.02	7.88	8.46	8.93	13.92	14.53	14.39	14.98	15.45
	6H	8.93	9.43	9.43	9.93	10.41	14.26	14.76	14.76	15.26	15.74
	8H	9.70	10.15	10.23	10.67	11.16	14.49	14.94	15.02	15.46	15.95
	12H	10.50	10.90	11.02	11.40	11.97	14.83	15.22	15.34	15.72	16.29
12H	4H	7.58	8.12	8.07	8.60	9.08	13.91	14.44	14.39	14.93	15.40
	6H	9.24	9.69	9.77	10.21	10.70	14.28	14.73	14.80	15.24	15.74
	8H	10.20	10.60	10.72	11.09	11.67	14.59	14.99	15.10	15.48	16.05