

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: P1059813

Luminaire Tested: S123RDR-H775D950-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059813
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D950-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

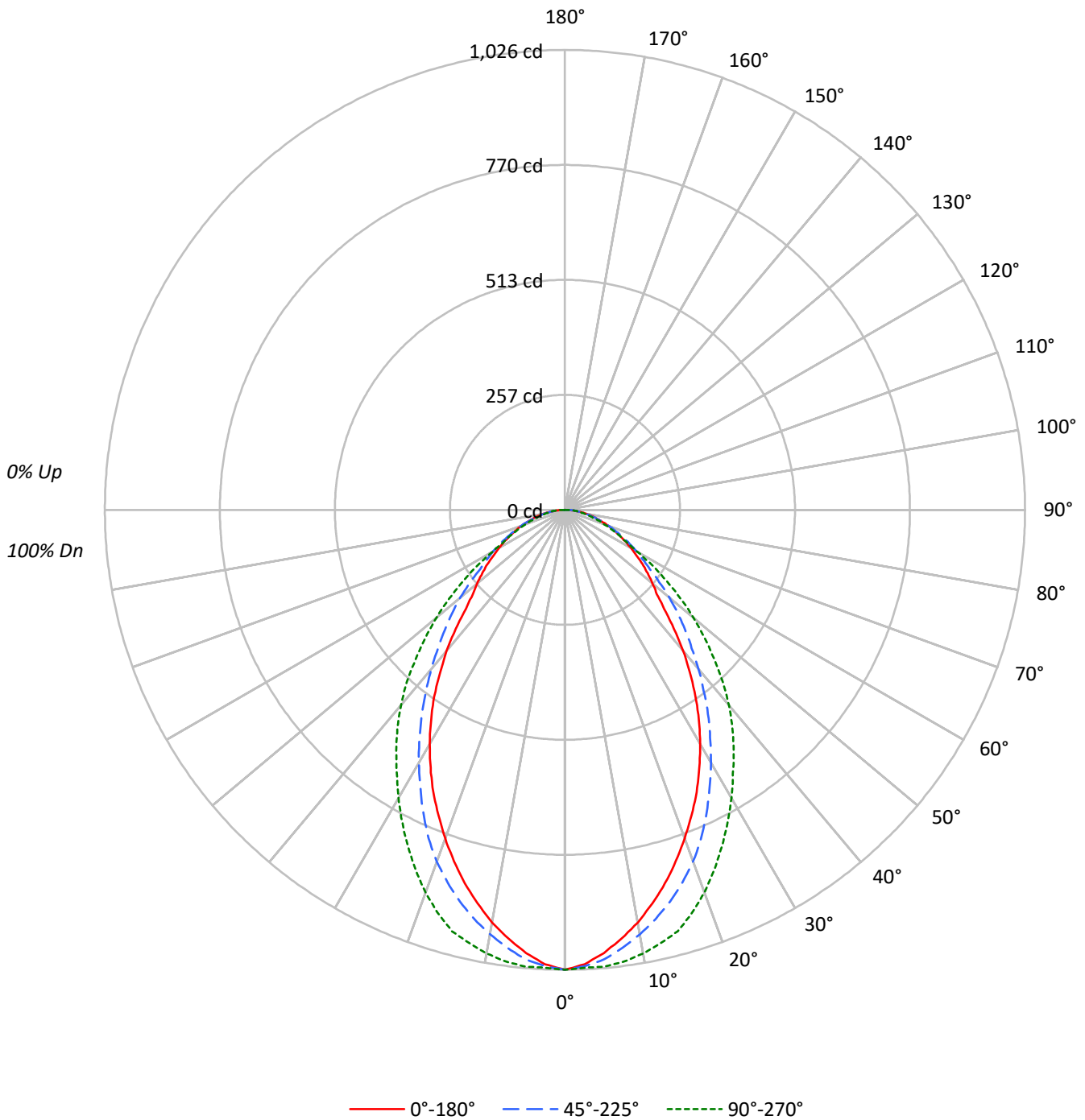
Lumens per Lamp: N/A
Luminaire Lumens: 1802.8 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059813

CATALOG NUMBER: S123RDR-H775D950-X4F0-XX-UDD-WVL-W

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	100	100	100	100	100	100	100	100	100	100																	
	1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87	87	87	87	87	87	87	87	87	87	87																	
	2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75	75	75	75	75	75	75	75																	
	3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66	66	66	66	66	66	66	66	66	66	66																	
	4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58	58	58	58	58	58	58	58	58	58	58																	
	5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51	51	51	51	51	51	51	51	51	51	51																	
	6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46	46	46	46	46	46	46	46	46	46	46																	
	7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41	41	41	41	41	41	41	41	41	41	41																	
	8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38	38	38	38	38	38	38	38	38	38	38																	
	9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34	34	34	34	34	34	34	34	34	34	34																	
	10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32	32	32	32	32	32	32	32	32	32	32																	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12047	12047	12047
5°	11698	11864	12051
10°	11149	11465	11981
15°	10486	11002	11828
20°	9753	10437	11353
25°	9003	9677	10730
30°	8176	8835	10068
35°	7278	7973	9404
40°	6280	7105	8716
45°	5191	6290	7815
50°	4662	5548	6823
55°	4320	4735	5659
60°	3981	4312	4333
65°	3704	3901	3631
70°	3485	3547	3183
75°	3285	3167	2804
80°	3104	2867	2624
85°	2978	3207	2978

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7815 cd/sqm



TEST NUMBER: P1059813

CATALOG NUMBER: S123RDR-H775D950-X4F0-XX-UDD-WVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.0	5.3
10°-20°	256.0	14.2
20°-30°	346.3	19.2
30°-40°	355.9	19.7
40°-50°	298.9	16.6
50°-60°	214.3	11.9
60°-70°	136.4	7.6
70°-80°	75.0	4.2
80°-90°	25.0	1.4
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°	697.3	38.7
0°-40°	1053.2	58.4
0°-60°	1566.4	86.9
0°-90°	1802.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1802.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	992	1010	1006	1014	1022	93
15°	863	886	905	944	973	242
25°	695	721	747	788	828	318
35°	508	535	556	606	656	316
45°	313	340	379	434	471	247
55°	211	215	231	262	276	188
65°	133	141	140	132	131	133
75°	72	80	70	64	62	77
85°	22	23	24	25	22	24
90°	0	0	0	0	0	



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CATALOG NUMBER: S123RDR-H775D950-X4F0-XX-UDD-WVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1025.9	1025.9	1025.9	1025.9	1025.9
2.5°	1014.5	1028.6	1018.9	1019.8	1022.4
5°	992.4	1010.1	1006.5	1013.6	1022.4
7.5°	965.0	984.4	985.3	1002.1	1016.2
10°	935.0	955.3	961.5	987.1	1004.8
12.5°	899.7	921.8	935.0	966.8	989.7
15°	862.6	886.4	905.0	943.8	973.0
17.5°	822.0	847.6	871.4	912.9	943.0
20°	780.5	807.9	835.2	874.1	908.5
22.5°	737.2	765.5	793.7	831.7	869.7
25°	694.9	721.3	746.9	787.6	828.2
27.5°	648.9	676.3	698.4	743.4	785.8
30°	603.0	630.4	651.6	698.4	742.5
32.5°	555.4	583.6	603.0	651.6	697.5
35°	507.7	535.0	556.2	605.7	656.0
37.5°	457.3	487.4	508.6	564.2	613.6
40°	409.7	437.9	463.5	521.8	568.6
42.5°	360.2	389.4	418.5	478.5	521.8
45°	312.6	339.9	378.8	433.5	470.6
47.5°	278.1	295.8	340.8	386.7	422.0
50°	255.2	262.2	303.7	344.3	373.5
52.5°	232.2	237.5	265.8	302.8	324.9
55°	211.0	215.4	231.3	262.2	276.4
57.5°	188.1	192.5	205.7	223.4	231.3
60°	169.5	173.1	183.6	186.3	184.5
62.5°	151.0	156.3	161.6	155.4	152.7
65°	133.3	141.3	140.4	132.4	130.7
67.5°	117.4	125.4	121.0	113.0	110.4
70°	101.5	109.5	103.3	95.4	92.7
72.5°	86.5	95.4	85.6	78.6	76.8
75°	72.4	79.5	69.8	64.5	61.8
77.5°	59.2	64.5	55.6	51.2	49.4
80°	45.9	49.4	42.4	39.7	38.8
82.5°	33.6	35.3	30.9	32.7	31.8
85°	22.1	23.0	23.8	24.7	22.1
87.5°	10.6	15.0	15.0	14.1	11.5
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	15.83	17.30	16.20	17.61	17.92	16.90	18.36	17.27	18.68	18.99
	3H	17.53	18.84	17.91	19.17	19.53	17.99	19.30	18.37	19.63	19.99
	4H	18.18	19.41	18.58	19.76	20.14	18.39	19.62	18.79	19.97	20.34
	6H	18.69	19.82	19.10	20.19	20.58	18.70	19.83	19.11	20.20	20.59
	8H	18.86	19.94	19.29	20.33	20.73	18.83	19.91	19.26	20.30	20.70
	12H	18.99	20.02	19.42	20.40	20.83	18.95	19.98	19.38	20.37	20.80
4H	2H	16.43	17.66	16.83	18.01	18.39	17.31	18.53	17.71	18.88	19.26
	3H	18.36	19.38	18.77	19.78	20.18	18.62	19.64	19.03	20.04	20.44
	4H	19.17	20.09	19.61	20.51	20.95	19.14	20.06	19.58	20.48	20.92
	6H	19.82	20.62	20.28	21.06	21.52	19.57	20.37	20.03	20.81	21.28
	8H	20.04	20.79	20.51	21.23	21.70	19.76	20.51	20.23	20.95	21.42
	12H	20.22	20.88	20.70	21.36	21.83	19.95	20.61	20.43	21.09	21.56
8H	4H	19.41	20.16	19.88	20.60	21.07	19.39	20.13	19.85	20.58	21.05
	6H	20.20	20.81	20.70	21.31	21.78	19.94	20.55	20.43	21.04	21.52
	8H	20.51	21.06	21.03	21.58	22.06	20.21	20.77	20.73	21.28	21.77
	12H	20.78	21.27	21.29	21.76	22.33	20.51	20.99	21.02	21.49	22.05
12H	4H	19.42	20.09	19.91	20.57	21.04	19.41	20.08	19.90	20.56	21.03
	6H	20.23	20.79	20.75	21.30	21.79	19.99	20.54	20.50	21.05	21.54
	8H	20.61	21.10	21.12	21.59	22.16	20.33	20.82	20.84	21.31	21.88