

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: P1059768

Luminaire Tested: S123RDR-H775D850-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059768
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-H775D850-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, 80 CRI LEDS
Ballast/Driver: -

Summary

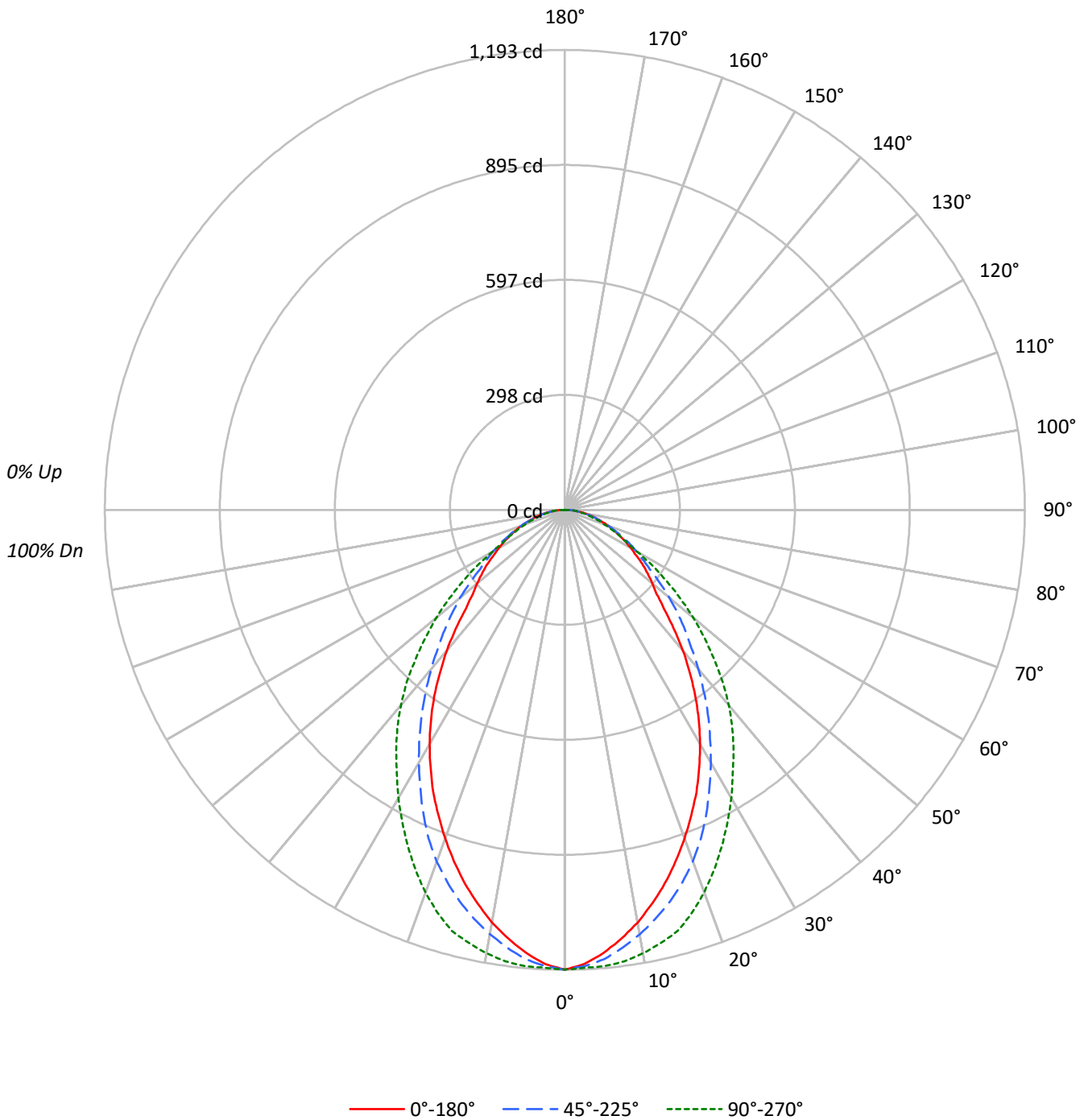
Lumens per Lamp: N/A
Luminaire Lumens: 2095.7 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14004	14004	14004
5°	13598	13792	14009
10°	12960	13327	13927
15°	12191	12789	13750
20°	11338	12132	13197
25°	10465	11250	12473
30°	9505	10271	11704
35°	8460	9269	10932
40°	7300	8259	10132
45°	6033	7312	9085
50°	5418	6450	7932
55°	5022	5505	6578
60°	4629	5014	5038
65°	4307	4535	4221
70°	4051	4123	3701
75°	3820	3679	3258
80°	3611	3334	3057
85°	3463	3732	3463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9085 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.5	5.3
10°-20°	297.6	14.2
20°-30°	402.6	19.2
30°-40°	413.7	19.7
40°-50°	347.4	16.6
50°-60°	249.1	11.9
60°-70°	158.6	7.6
70°-80°	87.1	4.2
80°-90°	29.0	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°	810.6	38.7
0°-40°	1224.3	58.4
0°-60°	1820.9	86.9
0°-90°	2095.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2095.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1193	1193	1193	1193	1193	
5°	1154	1174	1170	1178	1188	108
15°	1003	1030	1052	1097	1131	281
25°	808	838	868	916	963	370
35°	590	622	647	704	763	367
45°	363	395	440	504	547	287
55°	245	250	269	305	321	219
65°	155	164	163	154	152	154
75°	84	92	81	75	72	89
85°	26	27	28	29	26	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1192.6	1192.6	1192.6	1192.6	1192.6
2.5°	1179.3	1195.7	1184.4	1185.4	1188.5
5°	1153.6	1174.2	1170.1	1178.3	1188.5
7.5°	1121.8	1144.4	1145.4	1164.9	1181.3
10°	1086.9	1110.5	1117.7	1147.5	1168.0
12.5°	1045.9	1071.5	1086.9	1123.9	1150.6
15°	1002.8	1030.5	1052.0	1097.2	1131.1
17.5°	955.5	985.3	1013.0	1061.3	1096.2
20°	907.3	939.1	970.9	1016.1	1056.1
22.5°	857.0	889.9	922.7	966.8	1011.0
25°	807.7	838.5	868.3	915.5	962.7
27.5°	754.4	786.2	811.9	864.2	913.5
30°	701.0	732.8	757.5	811.9	863.2
32.5°	645.6	678.4	701.0	757.5	810.8
35°	590.2	622.0	646.6	704.1	762.6
37.5°	531.7	566.6	591.2	655.8	713.3
40°	476.2	509.1	538.8	606.6	661.0
42.5°	418.8	452.6	486.5	556.3	606.6
45°	363.3	395.1	440.3	503.9	547.1
47.5°	323.3	343.8	396.2	449.5	490.6
50°	296.6	304.8	353.1	400.3	434.2
52.5°	269.9	276.1	308.9	352.0	377.7
55°	245.3	250.4	268.9	304.8	321.3
57.5°	218.6	223.7	239.1	259.7	268.9
60°	197.1	201.2	213.5	216.6	214.5
62.5°	175.5	181.7	187.8	180.6	177.6
65°	155.0	164.2	163.2	154.0	151.9
67.5°	136.5	145.7	140.6	131.4	128.3
70°	118.0	127.3	120.1	110.8	107.8
72.5°	100.6	110.8	99.6	91.3	89.3
75°	84.2	92.4	81.1	74.9	71.8
77.5°	68.8	74.9	64.7	59.5	57.5
80°	53.4	57.5	49.3	46.2	45.2
82.5°	39.0	41.1	35.9	38.0	36.9
85°	25.7	26.7	27.7	28.7	25.7
87.5°	12.3	17.4	17.4	16.4	13.3
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	16.35	17.82	16.72	18.13	18.44	17.43	18.89	17.79	19.20	19.52
	3H	18.05	19.36	18.43	19.69	20.05	18.51	19.82	18.89	20.15	20.51
	4H	18.71	19.93	19.11	20.28	20.66	18.91	20.14	19.31	20.49	20.87
	6H	19.21	20.34	19.62	20.71	21.10	19.22	20.35	19.63	20.72	21.11
	8H	19.38	20.46	19.81	20.85	21.25	19.36	20.43	19.78	20.82	21.23
	12H	19.51	20.54	19.94	20.92	21.35	19.48	20.51	19.91	20.89	21.32
4H	2H	16.96	18.18	17.36	18.53	18.91	17.83	19.06	18.23	19.41	19.79
	3H	18.88	19.90	19.29	20.30	20.70	19.15	20.16	19.56	20.57	20.97
	4H	19.70	20.61	20.13	21.03	21.47	19.66	20.58	20.10	21.00	21.44
	6H	20.34	21.14	20.80	21.58	22.05	20.10	20.89	20.56	21.34	21.80
	8H	20.57	21.31	21.03	21.76	22.22	20.29	21.03	20.75	21.48	21.95
	12H	20.74	21.40	21.22	21.88	22.35	20.47	21.13	20.95	21.61	22.09
8H	4H	19.93	20.68	20.40	21.12	21.59	19.91	20.66	20.38	21.10	21.57
	6H	20.72	21.34	21.22	21.83	22.31	20.46	21.07	20.96	21.57	22.04
	8H	21.03	21.59	21.55	22.10	22.59	20.74	21.29	21.25	21.80	22.29
	12H	21.30	21.79	21.81	22.29	22.85	21.03	21.52	21.54	22.01	22.58
12H	4H	19.94	20.61	20.43	21.09	21.56	19.94	20.60	20.42	21.08	21.55
	6H	20.76	21.31	21.27	21.82	22.31	20.51	21.06	21.03	21.58	22.06
	8H	21.13	21.62	21.64	22.11	22.68	20.85	21.34	21.36	21.83	22.40