

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055658

Luminaire Tested: S123R3DR-S775D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055658  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S775D830-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

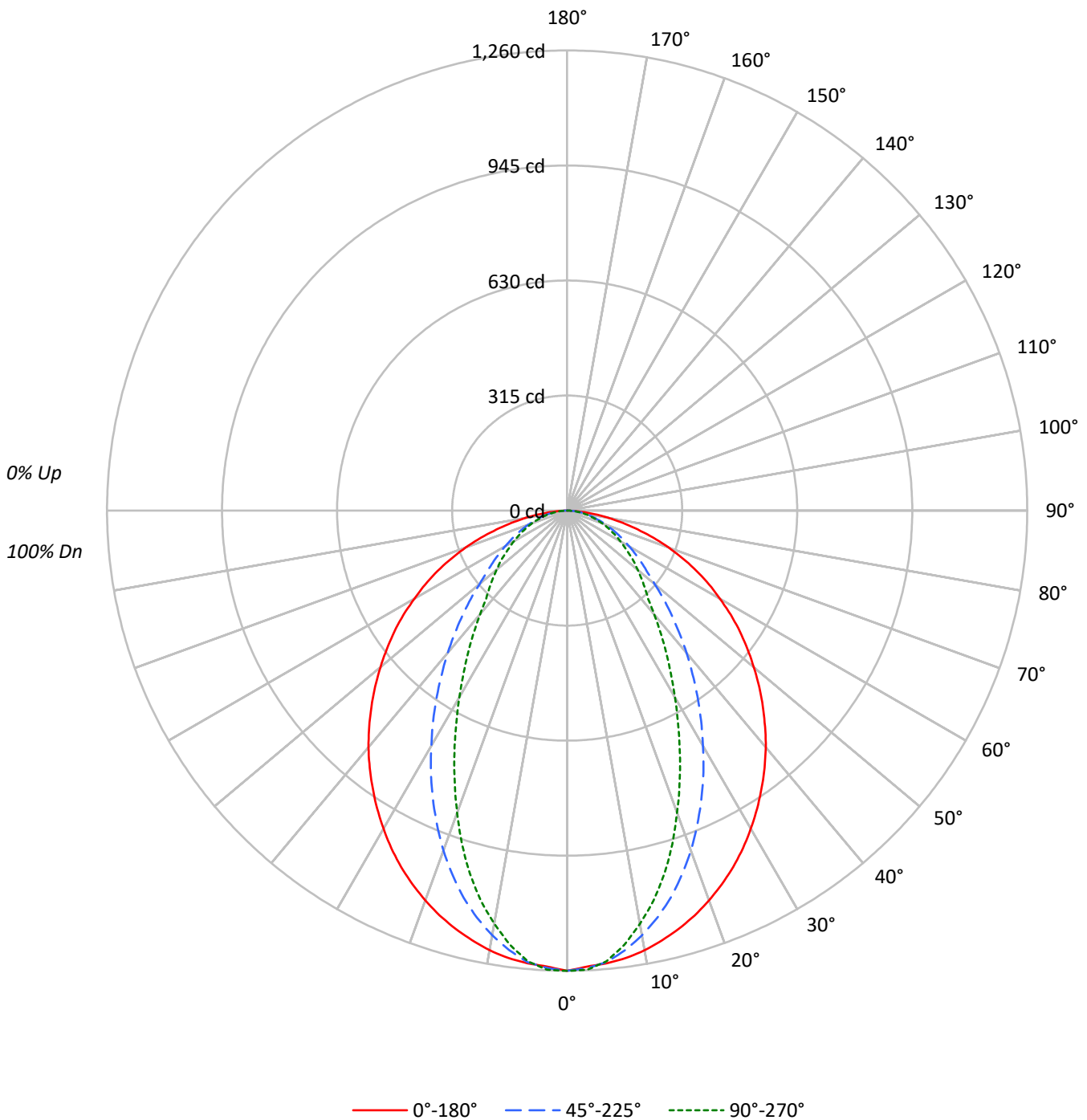
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2210.1 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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			
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86					86			
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74					74			
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57			
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50					50			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40					40			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

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

	0°	45°	90°
0°	15193	15193	15193
5°	15058	15023	14989
10°	14966	14458	14067
15°	14788	13694	12847
20°	14572	12710	11294
25°	14319	11573	9718
30°	14001	10353	8214
35°	13664	9156	6937
40°	13321	7995	5830
45°	12921	6895	5142
50°	12516	5869	4721
55°	12145	5230	4359
60°	11637	4726	4068
65°	11160	4328	3817
70°	10399	3987	3589
75°	9307	3689	3382
80°	7984	3402	3138
85°	5602	3126	3002

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12921 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.8	5.3
10°-20°	309.1	14.0
20°-30°	407.1	18.4
30°-40°	413.2	18.7
40°-50°	359.2	16.3
50°-60°	281.4	12.7
60°-70°	191.2	8.7
70°-80°	103.6	4.7
80°-90°	28.5	1.3
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°	833.0	37.7
0°-40°	1246.2	56.4
0°-60°	1886.8	85.4
0°-90°	2210.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2210.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1244	1259	1241	1230	1238	118
15°	1185	1168	1097	1043	1029	334
25°	1076	1011	870	762	730	495
35°	928	818	622	503	471	581
45°	758	608	404	312	302	585
55°	578	402	249	212	207	516
65°	391	217	152	136	134	386
75°	200	100	79	74	73	213
85°	40	24	23	21	22	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1260.2	1260.2	1260.2	1260.2	1260.2
2.5°	1249.8	1265.8	1253.6	1254.5	1258.3
5°	1244.2	1259.2	1241.3	1230.0	1238.5
7.5°	1235.7	1247.0	1214.0	1196.1	1198.9
10°	1222.5	1226.2	1181.0	1152.7	1149.0
12.5°	1204.6	1198.0	1141.4	1099.9	1093.3
15°	1184.8	1167.8	1097.1	1043.4	1029.3
17.5°	1162.2	1133.9	1045.3	979.3	957.6
20°	1135.8	1096.2	990.6	906.7	880.3
22.5°	1107.5	1056.6	931.2	832.3	804.9
25°	1076.4	1011.3	870.0	761.6	730.5
27.5°	1042.5	966.1	807.8	691.8	657.0
30°	1005.7	919.0	743.7	624.0	590.0
32.5°	968.0	869.0	682.4	560.8	527.8
35°	928.4	818.1	622.1	503.3	471.3
37.5°	887.9	766.3	563.6	448.6	418.5
40°	846.4	713.5	508.0	397.8	370.4
42.5°	802.1	660.7	454.3	349.7	328.9
45°	757.8	607.9	404.4	312.0	301.6
47.5°	713.5	554.2	357.2	285.6	276.2
50°	667.3	502.4	312.9	261.1	251.7
52.5°	622.1	451.5	276.2	237.5	230.9
55°	577.8	401.5	248.8	212.1	207.4
57.5°	531.6	352.5	221.5	192.3	186.6
60°	482.6	305.4	196.0	171.5	168.7
62.5°	438.3	261.1	173.4	153.6	150.8
65°	391.2	216.8	151.7	135.7	133.8
67.5°	343.1	180.0	132.0	118.8	117.8
70°	295.0	151.7	113.1	102.7	101.8
72.5°	247.9	125.4	95.2	88.6	86.7
75°	199.8	99.9	79.2	73.5	72.6
77.5°	156.5	77.3	63.2	59.4	58.4
80°	115.0	57.5	49.0	46.2	45.2
82.5°	75.4	39.6	34.9	33.0	33.0
85°	40.5	24.5	22.6	20.7	21.7
87.5°	14.1	10.4	10.4	9.4	10.4
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	20.01	21.50	20.38	21.82	22.13	15.16	16.65	15.53	16.97	17.28
	3H	21.90	23.24	22.28	23.56	23.93	16.79	18.13	17.17	18.45	18.82
	4H	22.65	23.91	23.05	24.26	24.64	17.42	18.68	17.83	19.03	19.41
	6H	23.22	24.38	23.63	24.75	25.14	17.91	19.07	18.33	19.44	19.83
	8H	23.39	24.50	23.82	24.89	25.29	18.08	19.19	18.51	19.58	19.98
	12H	23.49	24.55	23.92	24.93	25.36	18.21	19.27	18.64	19.65	20.08
4H	2H	20.06	21.31	20.46	21.66	22.04	15.89	17.14	16.29	17.49	17.87
	3H	22.07	23.12	22.49	23.52	23.92	17.71	18.75	18.12	19.15	19.55
	4H	22.89	23.83	23.32	24.25	24.69	18.46	19.40	18.89	19.81	20.25
	6H	23.57	24.39	24.03	24.83	25.30	19.06	19.88	19.52	20.32	20.78
	8H	23.80	24.57	24.27	25.01	25.48	19.28	20.04	19.74	20.49	20.95
	12H	23.96	24.64	24.44	25.12	25.59	19.45	20.13	19.93	20.61	21.08
8H	4H	22.92	23.68	23.38	24.12	24.59	18.84	19.60	19.30	20.05	20.51
	6H	23.65	24.28	24.14	24.77	25.25	19.57	20.20	20.06	20.69	21.17
	8H	23.91	24.48	24.43	24.99	25.48	19.86	20.42	20.37	20.93	21.42
	12H	24.12	24.62	24.63	25.12	25.68	20.10	20.60	20.61	21.09	21.66
12H	4H	22.90	23.58	23.38	24.06	24.53	18.89	19.58	19.38	20.05	20.53
	6H	23.63	24.20	24.14	24.71	25.19	19.65	20.22	20.16	20.73	21.22
	8H	23.94	24.43	24.45	24.93	25.49	20.00	20.50	20.51	20.99	21.55