

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: P1055663

Luminaire Tested: S123R3DR-S775D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055663
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S775D840-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

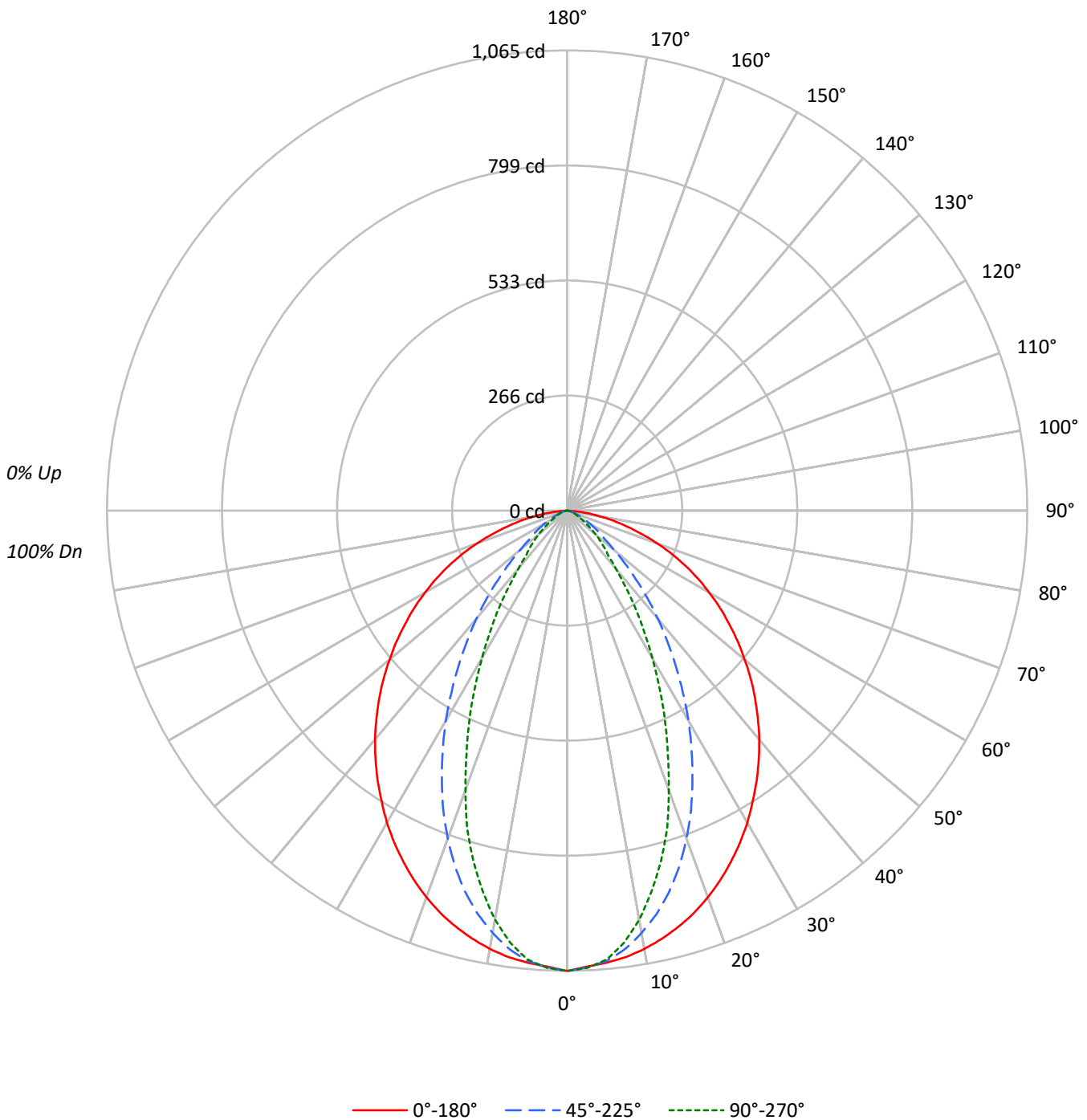
Lumens per Lamp: N/A
Luminaire Lumens: 1481.6 lumens
Efficiency: N/A
Efficacy: 56.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): 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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12845	12845	12845
5°	12711	12662	12625
10°	12611	12153	11770
15°	12441	11395	10475
20°	12218	10365	8823
25°	11930	9122	7120
30°	11612	7817	5482
35°	11252	6451	4058
40°	10888	5134	2765
45°	10486	3840	2084
50°	10057	2671	1628
55°	9617	1953	1190
60°	9156	1461	851
65°	8613	979	662
70°	7797	712	532
75°	6726	517	424
80°	5402	424	347
85°	2794	415	277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10486 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.5	6.6
10°-20°	256.4	17.3
20°-30°	322.1	21.7
30°-40°	300.0	20.2
40°-50°	229.6	15.5
50°-60°	152.6	10.3
60°-70°	82.3	5.6
70°-80°	33.7	2.3
80°-90°	6.4	0.4
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°	676.9	45.7
0°-40°	976.9	65.9
0°-60°	1359.2	91.7
0°-90°	1481.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1481.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1065	1065	1065	1065	1065	
5°	1050	1061	1046	1042	1043	100
15°	997	981	913	859	839	281
25°	897	836	686	572	535	413
35°	764	651	438	310	276	478
45°	615	454	225	132	122	474
55°	458	265	93	65	57	410
65°	302	102	34	25	23	298
75°	144	24	11	10	9	155
85°	20	3	3	3	2	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1065.4	1065.4	1065.4	1065.4	1065.4
2.5°	1056.3	1069.4	1058.3	1059.3	1059.3
5°	1050.3	1061.4	1046.2	1042.2	1043.2
7.5°	1042.2	1049.2	1024.0	1010.9	1008.9
10°	1030.1	1032.1	992.7	969.5	961.4
12.5°	1014.9	1007.8	956.3	918.0	902.8
15°	996.7	980.6	912.9	859.4	839.2
17.5°	976.5	949.3	863.4	793.8	769.5
20°	952.3	913.9	807.9	721.0	687.7
22.5°	926.0	876.6	749.3	646.3	608.9
25°	896.8	836.2	685.7	571.6	535.2
27.5°	866.5	792.7	623.1	500.9	463.5
30°	834.1	748.3	561.5	432.2	393.8
32.5°	798.8	699.8	497.9	368.6	330.2
35°	764.5	651.4	438.3	310.0	275.7
37.5°	728.1	602.9	380.7	258.5	220.2
40°	691.8	553.4	326.2	208.0	175.7
42.5°	653.4	503.9	274.7	165.6	140.4
45°	615.0	454.4	225.2	132.3	122.2
47.5°	576.6	405.0	181.8	114.1	104.0
50°	536.2	357.5	142.4	96.9	86.8
52.5°	497.9	310.0	111.1	79.8	70.7
55°	457.5	264.6	92.9	64.6	56.6
57.5°	420.1	218.1	76.7	50.5	44.4
60°	379.7	176.7	60.6	39.4	35.3
62.5°	341.3	138.4	46.5	31.3	28.3
65°	301.9	102.0	34.3	25.2	23.2
67.5°	262.6	73.7	26.3	20.2	19.2
70°	221.2	55.5	20.2	16.2	15.1
72.5°	181.8	39.4	15.1	13.1	12.1
75°	144.4	24.2	11.1	10.1	9.1
77.5°	111.1	14.1	8.1	8.1	7.1
80°	77.8	8.1	6.1	6.1	5.0
82.5°	47.5	5.0	4.0	4.0	4.0
85°	20.2	3.0	3.0	3.0	2.0
87.5°	3.0	1.0	1.0	1.0	1.0
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	18.68	20.04	19.05	20.35	20.67	7.26	8.61	7.62	8.93	9.24
	3H	20.44	21.64	20.82	21.97	22.33	7.92	9.12	8.30	9.45	9.82
	4H	21.14	22.26	21.54	22.61	22.99	8.12	9.24	8.52	9.59	9.97
	6H	21.65	22.68	22.06	23.05	23.45	8.24	9.27	8.65	9.64	10.03
	8H	21.79	22.77	22.22	23.16	23.56	8.27	9.25	8.70	9.64	10.05
	12H	21.84	22.78	22.27	23.16	23.59	8.28	9.22	8.71	9.60	10.03
4H	2H	18.49	19.61	18.89	19.96	20.35	7.81	8.94	8.21	9.29	9.67
	3H	20.28	21.20	20.70	21.61	22.01	8.61	9.53	9.02	9.93	10.34
	4H	20.98	21.80	21.41	22.22	22.66	8.87	9.69	9.30	10.11	10.55
	6H	21.55	22.26	22.01	22.70	23.17	9.07	9.78	9.53	10.22	10.69
	8H	21.72	22.39	22.19	22.83	23.30	9.12	9.78	9.59	10.23	10.70
	12H	21.81	22.40	22.30	22.88	23.35	9.15	9.74	9.64	10.22	10.69
8H	4H	20.85	21.52	21.32	21.96	22.43	9.18	9.85	9.65	10.29	10.76
	6H	21.41	21.95	21.91	22.45	22.93	9.43	9.97	9.93	10.47	10.95
	8H	21.59	22.07	22.11	22.59	23.08	9.52	10.00	10.04	10.52	11.01
	12H	21.69	22.12	22.20	22.61	23.18	9.60	10.02	10.11	10.52	11.09
12H	4H	20.81	21.40	21.30	21.88	22.35	9.23	9.81	9.71	10.30	10.77
	6H	21.35	21.84	21.87	22.35	22.84	9.48	9.96	10.00	10.48	10.97
	8H	21.55	21.97	22.06	22.47	23.04	9.60	10.03	10.12	10.52	11.09