

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: P243222

Luminaire Tested: S122RDRP-H1005D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243222
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H1005D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

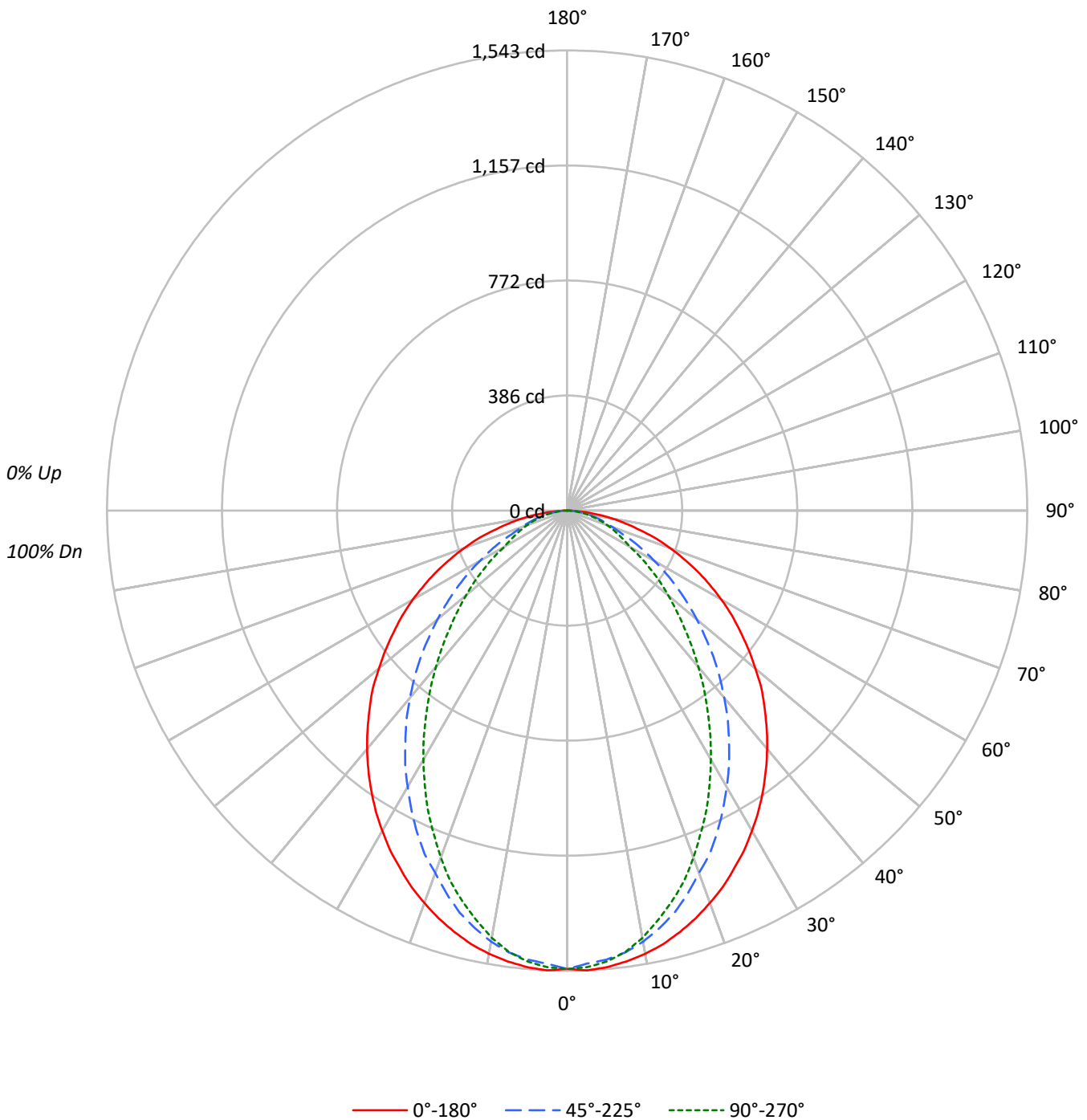
Lumens per Lamp: N/A
Luminaire Lumens: 3151.3 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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: P243222

CATALOG NUMBER: S122RDRP-H1005D830-X4F0-XX-UDD-F-W

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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74					74			
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64					64			
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55					55			
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49					49			
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43					43			
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39					39			
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35					35			
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32					32			
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29					29			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	29269	29269	29269
5°	29381	28899	29025
10°	29183	28388	28130
15°	28838	27503	26746
20°	28378	26203	25101
25°	27837	25023	23238
30°	27264	23532	21200
35°	26636	21981	19084
40°	25944	20372	17010
45°	25214	18678	14964
50°	24397	16814	13121
55°	23555	14970	11314
60°	22777	12880	9242
65°	21751	10876	8545
70°	20450	9005	7975
75°	18634	8198	7315
80°	16728	7273	6549
85°	13900	6076	5792

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25214 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.9	4.6
10°-20°	394.4	12.5
20°-30°	553.3	17.6
30°-40°	602.7	19.1
40°-50°	554.0	17.6
50°-60°	434.7	13.8
60°-70°	283.6	9.0
70°-80°	146.7	4.7
80°-90°	38.0	1.2
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°	1091.7	34.6
0°-40°	1694.4	53.8
0°-60°	2683.1	85.1
0°-90°	3151.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3151.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1537	1537	1537	1537	1537	
5°	1537	1529	1511	1522	1518	146
15°	1462	1445	1395	1367	1356	412
25°	1324	1278	1191	1132	1106	610
35°	1146	1070	945	858	821	716
45°	936	841	693	593	556	723
55°	709	603	451	366	341	636
65°	483	366	241	196	190	477
75°	253	158	111	102	99	271
85°	64	30	28	26	26	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1536.6	1536.6	1536.6	1536.6	1536.6
2.5°	1543.2	1536.6	1520.7	1535.3	1532.6
5°	1536.6	1528.6	1511.4	1522.0	1518.0
7.5°	1524.7	1516.7	1494.2	1499.5	1492.8
10°	1508.8	1498.1	1467.7	1462.4	1454.4
12.5°	1488.9	1474.3	1433.2	1417.3	1406.7
15°	1462.4	1445.1	1394.7	1366.9	1356.3
17.5°	1433.2	1408.0	1345.7	1313.9	1303.3
20°	1400.0	1370.9	1292.7	1259.5	1238.3
22.5°	1365.6	1328.4	1247.6	1195.9	1170.7
25°	1324.5	1278.1	1190.6	1132.2	1105.7
27.5°	1284.7	1230.3	1130.9	1063.3	1034.1
30°	1239.6	1180.0	1069.9	991.7	963.9
32.5°	1194.5	1125.6	1010.3	925.4	893.6
35°	1145.5	1069.9	945.3	857.8	820.7
37.5°	1095.1	1016.9	885.6	788.8	753.1
40°	1043.4	955.9	819.3	718.6	684.1
42.5°	990.4	901.5	757.0	653.6	620.5
45°	936.0	840.6	693.4	592.6	555.5
47.5°	884.3	780.9	628.4	533.0	497.2
50°	823.3	721.2	567.4	470.7	442.8
52.5°	767.6	661.6	507.8	415.0	391.1
55°	709.3	603.2	450.8	365.9	340.7
57.5°	654.9	542.3	393.8	316.9	293.0
60°	597.9	483.9	338.1	267.8	242.6
62.5°	538.3	424.3	289.0	222.7	214.8
65°	482.6	365.9	241.3	196.2	189.6
67.5°	422.9	311.6	192.2	172.4	165.7
70°	367.2	258.5	161.7	147.2	143.2
72.5°	312.9	208.1	136.6	124.6	120.6
75°	253.2	157.8	111.4	102.1	99.4
77.5°	201.5	111.4	88.8	82.2	79.5
80°	152.5	80.9	66.3	62.3	59.7
82.5°	104.7	54.4	46.4	43.8	42.4
85°	63.6	30.5	27.8	26.5	26.5
87.5°	25.2	11.9	11.9	10.6	10.6
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	22.98	24.50	23.34	24.81	25.13	18.86	20.39	19.23	20.70	21.01
	3H	24.74	26.11	25.12	26.44	26.80	20.16	21.52	20.54	21.85	22.21
	4H	25.41	26.69	25.81	27.04	27.41	20.66	21.95	21.06	22.29	22.67
	6H	25.90	27.08	26.31	27.45	27.84	21.05	22.23	21.46	22.60	22.99
	8H	26.06	27.19	26.49	27.58	27.98	21.17	22.30	21.60	22.69	23.09
	12H	26.17	27.25	26.60	27.63	28.06	21.25	22.33	21.68	22.71	23.14
4H	2H	23.08	24.36	23.48	24.71	25.09	19.57	20.85	19.97	21.20	21.58
	3H	25.02	26.08	25.43	26.48	26.88	21.04	22.11	21.45	22.51	22.91
	4H	25.76	26.72	26.19	27.13	27.57	21.65	22.61	22.08	23.02	23.46
	6H	26.35	27.19	26.81	27.63	28.09	22.14	22.97	22.60	23.42	23.88
	8H	26.57	27.34	27.03	27.79	28.26	22.30	23.08	22.76	23.52	23.99
	12H	26.73	27.42	27.21	27.90	28.37	22.42	23.11	22.90	23.59	24.06
8H	4H	25.79	26.56	26.25	27.01	27.48	22.01	22.79	22.47	23.23	23.70
	6H	26.42	27.07	26.92	27.56	28.04	22.60	23.25	23.10	23.74	24.21
	8H	26.67	27.25	27.19	27.76	28.25	22.83	23.40	23.34	23.91	24.40
	12H	26.89	27.40	27.40	27.89	28.45	23.01	23.52	23.52	24.01	24.57
12H	4H	25.77	26.47	26.25	26.94	27.42	22.05	22.75	22.54	23.23	23.70
	6H	26.40	26.98	26.92	27.49	27.98	22.67	23.24	23.18	23.75	24.24
	8H	26.69	27.20	27.20	27.69	28.26	22.94	23.45	23.45	23.95	24.51