

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: P243245

Luminaire Tested: S122RDRP-H865D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243245
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-H865D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

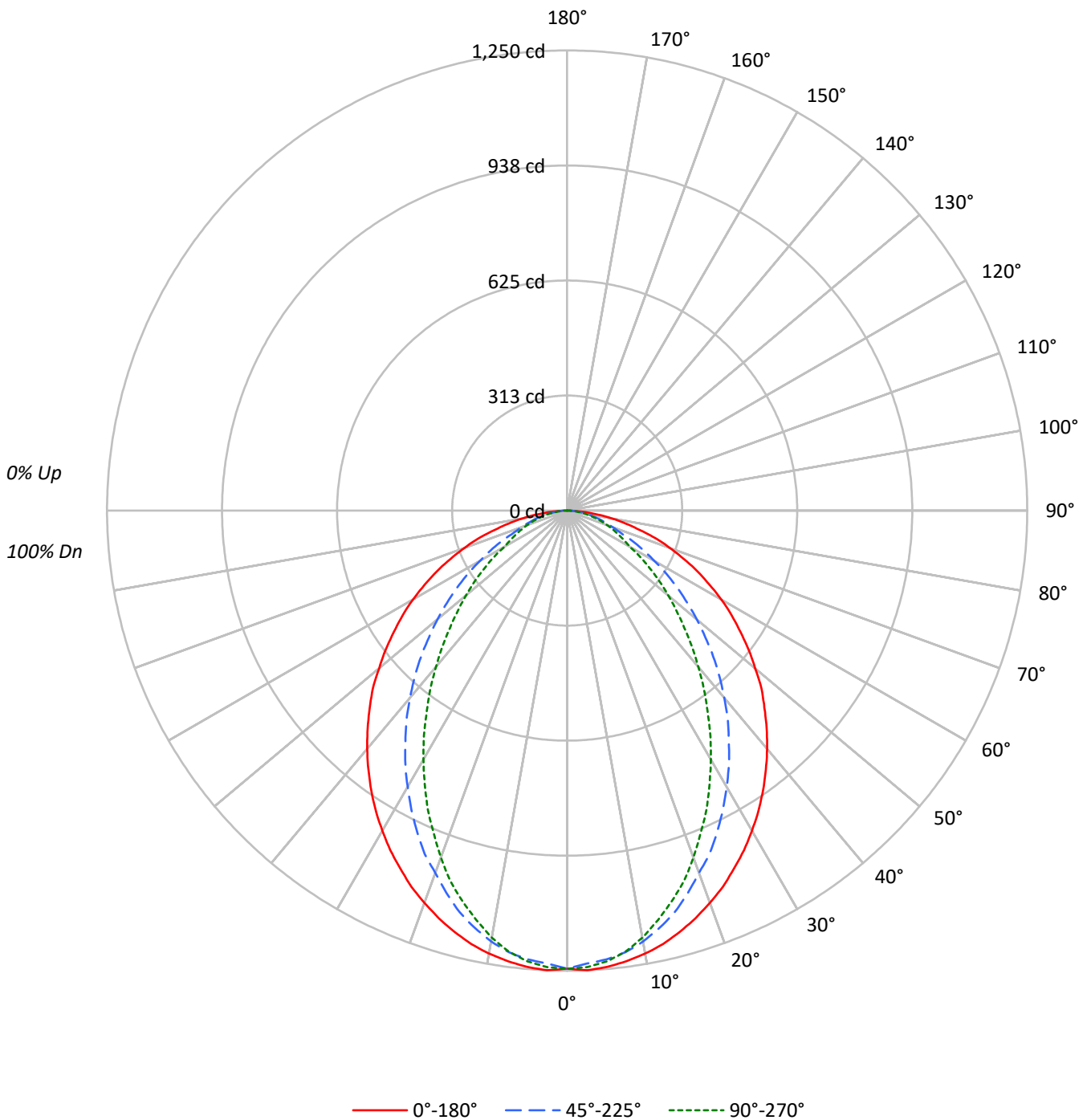
Lumens per Lamp: N/A
Luminaire Lumens: 2552.1 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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: P243245

CATALOG NUMBER: S122RDRP-H865D940-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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23703	23703	23703
5°	23794	23403	23507
10°	23633	22989	22782
15°	23354	22273	21660
20°	22982	21221	20327
25°	22543	20264	18821
30°	22080	19058	17169
35°	21572	17802	15454
40°	21011	16500	13775
45°	20419	15125	12119
50°	19759	13616	10626
55°	19075	12124	9162
60°	18446	10431	7486
65°	17614	8807	6918
70°	16563	7296	6460
75°	15094	6638	5924
80°	13547	5890	5298
85°	11255	4917	4699

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20419 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	4.6
10°-20°	319.4	12.5
20°-30°	448.1	17.6
30°-40°	488.1	19.1
40°-50°	448.6	17.6
50°-60°	352.1	13.8
60°-70°	229.7	9.0
70°-80°	118.8	4.7
80°-90°	30.7	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°	884.1	34.6
0°-40°	1372.2	53.8
0°-60°	2172.9	85.1
0°-90°	2552.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2552.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1244	1238	1224	1233	1229	118
15°	1184	1170	1130	1107	1098	334
25°	1073	1035	964	917	896	494
35°	928	866	766	695	665	580
45°	758	681	562	480	450	585
55°	574	488	365	296	276	515
65°	391	296	195	159	154	386
75°	205	128	90	83	80	219
85°	52	25	22	22	22	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1244.4	1244.4	1244.4	1244.4	1244.4
2.5°	1249.8	1244.4	1231.5	1243.4	1241.2
5°	1244.4	1238.0	1224.0	1232.6	1229.4
7.5°	1234.8	1228.3	1210.1	1214.4	1209.0
10°	1221.9	1213.3	1188.6	1184.3	1177.9
12.5°	1205.8	1194.0	1160.7	1147.8	1139.2
15°	1184.3	1170.3	1129.5	1107.0	1098.4
17.5°	1160.7	1140.3	1089.8	1064.0	1055.5
20°	1133.8	1110.2	1046.9	1020.0	1002.8
22.5°	1105.9	1075.9	1010.4	968.5	948.1
25°	1072.6	1035.1	964.2	916.9	895.5
27.5°	1040.4	996.4	915.9	861.1	837.5
30°	1003.9	955.6	866.5	803.1	780.6
32.5°	967.4	911.6	818.2	749.4	723.7
35°	927.7	866.5	765.6	694.7	664.6
37.5°	886.9	823.5	717.2	638.9	609.9
40°	845.0	774.1	663.6	581.9	554.0
42.5°	802.1	730.1	613.1	529.3	502.5
45°	758.0	680.7	561.5	479.9	449.9
47.5°	716.2	632.4	508.9	431.6	402.6
50°	666.8	584.1	459.5	381.2	358.6
52.5°	621.7	535.8	411.2	336.1	316.7
55°	574.4	488.5	365.1	296.3	275.9
57.5°	530.4	439.1	318.9	256.6	237.3
60°	484.2	391.9	273.8	216.9	196.5
62.5°	435.9	343.6	234.1	180.4	173.9
65°	390.8	296.3	195.4	158.9	153.5
67.5°	342.5	252.3	155.7	139.6	134.2
70°	297.4	209.4	131.0	119.2	116.0
72.5°	253.4	168.6	110.6	100.9	97.7
75°	205.1	127.8	90.2	82.7	80.5
77.5°	163.2	90.2	71.9	66.6	64.4
80°	123.5	65.5	53.7	50.5	48.3
82.5°	84.8	44.0	37.6	35.4	34.4
85°	51.5	24.7	22.5	21.5	21.5
87.5°	20.4	9.7	9.7	8.6	8.6
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	22.24	23.77	22.61	24.08	24.39	18.13	19.65	18.50	19.97	20.28
	3H	24.01	25.38	24.39	25.70	26.07	19.42	20.79	19.80	21.12	21.48
	4H	24.67	25.95	25.07	26.30	26.68	19.93	21.21	20.33	21.56	21.94
	6H	25.16	26.35	25.57	26.71	27.10	20.31	21.50	20.73	21.86	22.26
	8H	25.33	26.45	25.75	26.84	27.24	20.44	21.56	20.86	21.95	22.35
	12H	25.44	26.52	25.87	26.90	27.33	20.52	21.60	20.95	21.98	22.41
4H	2H	22.35	23.63	22.75	23.98	24.35	18.84	20.12	19.24	20.47	20.85
	3H	24.28	25.35	24.69	25.75	26.15	20.31	21.37	20.72	21.77	22.17
	4H	25.03	25.99	25.46	26.40	26.84	20.92	21.87	21.35	22.29	22.73
	6H	25.62	26.45	26.08	26.90	27.35	21.41	22.24	21.87	22.68	23.14
	8H	25.83	26.61	26.30	27.06	27.52	21.57	22.35	22.03	22.79	23.26
	12H	26.00	26.69	26.48	27.17	27.64	21.69	22.38	22.17	22.86	23.33
8H	4H	25.05	25.83	25.52	26.28	26.74	21.28	22.05	21.74	22.50	22.97
	6H	25.69	26.33	26.19	26.82	27.30	21.87	22.51	22.37	23.00	23.48
	8H	25.94	26.52	26.45	27.03	27.51	22.09	22.67	22.61	23.18	23.67
	12H	26.15	26.66	26.66	27.16	27.72	22.27	22.78	22.78	23.28	23.84
12H	4H	25.04	25.73	25.52	26.21	26.68	21.32	22.02	21.80	22.49	22.96
	6H	25.67	26.25	26.19	26.76	27.25	21.93	22.51	22.45	23.02	23.51
	8H	25.96	26.47	26.47	26.96	27.52	22.21	22.72	22.72	23.21	23.78