

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: P243551

Luminaire Tested: S124DRP-H1195D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243551
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H1195D935-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

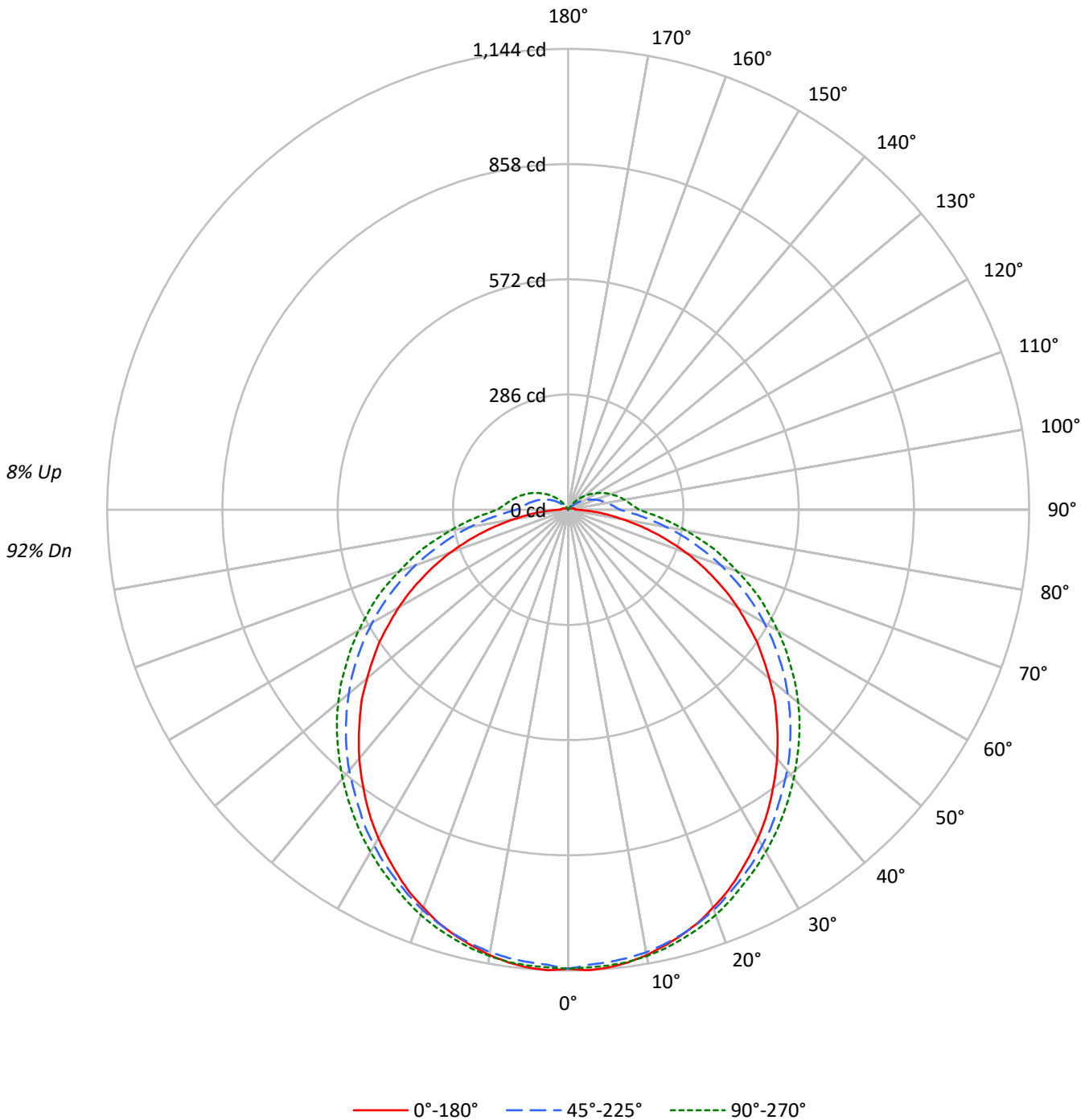
Lumens per Lamp: N/A
Luminaire Lumens: 3895.6 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 37.7
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

TEST NUMBER: P243551

CATALOG NUMBER: S124DRP-H1195D935-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot





TEST NUMBER: P243551

CATALOG NUMBER: S124DRP-H1195D935-X4F0-XX-UDD-D-W

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10130	10130	10130
5°	10161	9884	9905
10°	10095	9718	9699
15°	9995	9522	9466
20°	9866	9311	9231
25°	9714	9069	8959
30°	9552	8842	8726
35°	9373	8591	8483
40°	9194	8376	8257
45°	9002	8144	8041
50°	8786	7910	7816
55°	8594	7661	7558
60°	8323	7384	7305
65°	8012	7073	7049
70°	7639	6720	6685
75°	7045	6286	6421
80°	6246	5868	6045
85°	5649	5530	5828

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9002 cd/sqm



TEST NUMBER: P243551

CATALOG NUMBER: S124DRP-H1195D935-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.9	2.8
10°-20°	309.4	7.9
20°-30°	468.3	12.0
30°-40°	567.1	14.6
40°-50°	599.8	15.4
50°-60°	565.0	14.5
60°-70°	469.5	12.1
70°-80°	330.0	8.5
80°-90°	185.9	4.8
90°-100°	110.3	2.8
100°-110°	81.6	2.1
110°-120°	54.5	1.4
120°-130°	30.7	0.8
130°-140°	13.1	0.3
140°-150°	2.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	885.6	22.7
0°-40°	1452.6	37.3
0°-60°	2617.4	67.2
0°-90°	3602.8	92.5
90°-120°	246.4	6.3
90°-150°	292.8	7.5
90°-180°	293.0	7.5
0°-180°	3895.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1141	1136	1128	1137	1136	108
15°	1092	1095	1091	1103	1102	308
25°	1000	1009	1012	1027	1027	461
35°	877	891	905	924	928	549
45°	732	754	780	803	810	564
55°	572	602	638	666	673	509
65°	398	438	483	514	527	395
75°	222	269	322	358	373	235
85°	69	122	180	219	231	71
90°	21	72	128	164	176	14
95°	17	58	111	146	156	13
105°	12	38	85	116	127	13
115°	8	19	59	87	98	8
125°	5	4	35	59	68	5
135°	2	2	11	32	39	2
145°	1	0	0	7	12	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P243551

CATALOG NUMBER: S124DRP-H1195D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1139.6	1139.6	1139.6	1139.6	1139.6
2.5°	1144.5	1140.9	1131.2	1138.4	1137.2
5°	1140.9	1136.0	1127.5	1137.2	1136.0
7.5°	1133.6	1130.0	1122.7	1133.6	1132.4
10°	1122.7	1120.3	1115.4	1125.1	1125.1
12.5°	1108.2	1108.2	1104.5	1115.4	1115.4
15°	1092.4	1094.8	1091.2	1103.3	1102.1
17.5°	1074.2	1076.7	1075.5	1087.6	1087.6
20°	1051.2	1054.9	1057.3	1070.6	1070.6
22.5°	1028.2	1033.1	1035.5	1050.0	1050.0
25°	1000.4	1008.8	1012.5	1027.0	1027.0
27.5°	971.3	982.2	989.5	1002.8	1005.2
30°	942.2	954.3	962.8	977.4	981.0
32.5°	910.7	922.9	936.2	950.7	955.6
35°	876.8	891.4	904.7	924.1	927.7
37.5°	841.7	858.7	874.4	895.0	899.8
40°	806.6	827.2	845.3	864.7	870.8
42.5°	769.0	789.6	813.9	834.4	840.5
45°	731.5	754.5	779.9	803.0	810.2
47.5°	694.0	718.2	746.0	770.3	778.7
50°	651.6	678.2	710.9	735.1	744.8
52.5°	610.4	639.5	675.8	700.0	710.9
55°	571.6	601.9	638.2	666.1	673.4
57.5°	526.8	560.7	600.7	631.0	638.2
60°	485.6	519.6	561.9	592.2	600.7
62.5°	443.3	479.6	523.2	553.5	561.9
65°	398.5	438.4	483.2	513.5	526.8
67.5°	354.9	394.8	442.1	476.0	486.9
70°	311.3	352.4	403.3	437.2	445.7
72.5°	265.2	310.0	362.1	397.2	409.4
75°	221.6	268.9	322.2	358.5	373.0
77.5°	179.2	228.9	284.6	322.2	331.8
80°	136.9	191.4	247.1	284.6	296.7
82.5°	102.9	153.8	211.9	251.9	261.6
85°	69.0	122.3	180.5	219.2	231.3
87.5°	41.2	95.7	151.4	187.7	199.8
90°	20.6	71.5	128.4	163.5	175.6
92.5°	18.2	64.2	118.7	153.8	165.9
95°	17.0	58.1	111.4	146.5	156.2
97.5°	15.7	53.3	104.2	138.1	149.0
100°	14.5	47.2	98.1	130.8	141.7
102.5°	13.3	42.4	90.8	123.5	134.4
105°	12.1	37.5	84.8	116.3	127.2
107.5°	10.9	32.7	78.7	109.0	119.9
110°	9.7	27.9	72.7	101.7	112.6



TEST NUMBER: P243551

CATALOG NUMBER: S124DRP-H1195D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.5	24.2	65.4	94.5	105.4
115°	8.5	19.4	59.3	87.2	98.1
117.5°	7.3	14.5	53.3	79.9	89.6
120°	7.3	10.9	47.2	72.7	82.4
122.5°	6.1	7.3	41.2	66.6	75.1
125°	4.8	3.6	35.1	59.3	67.8
127.5°	4.8	3.6	29.1	52.1	60.6
130°	3.6	3.6	23.0	44.8	53.3
132.5°	3.6	2.4	17.0	38.8	46.0
135°	2.4	2.4	10.9	31.5	38.8
137.5°	2.4	1.2	7.3	25.4	32.7
140°	2.4	1.2	2.4	19.4	25.4
142.5°	1.2	1.2	0.0	13.3	18.2
145°	1.2	0.0	0.0	7.3	12.1
147.5°	1.2	0.0	0.0	1.2	6.1
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243551
 CATALOG NUMBER: S124DRP-H1195D935-X4F0-XX-UDD-D-W

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	17.83	19.36	18.31	19.83	20.32	19.42	20.94	19.89	21.41	21.90
	3H	19.48	20.87	19.97	21.35	21.89	21.73	23.12	22.22	23.59	24.13
	4H	20.05	21.37	20.56	21.87	22.42	22.80	24.11	23.31	24.61	25.16
	6H	20.44	21.66	20.96	22.17	22.74	23.84	25.07	24.37	25.58	26.14
	8H	20.54	21.72	21.08	22.25	22.82	24.36	25.53	24.89	26.06	26.63
	12H	20.61	21.73	21.15	22.26	22.86	24.91	26.04	25.45	26.56	27.16
4H	2H	18.69	20.01	19.20	20.50	21.05	19.92	21.23	20.43	21.73	22.28
	3H	20.58	21.70	21.10	22.24	22.81	22.45	23.57	22.97	24.11	24.68
	4H	21.29	22.31	21.83	22.86	23.47	23.68	24.70	24.22	25.25	25.85
	6H	21.81	22.71	22.37	23.28	23.90	24.90	25.80	25.46	26.37	26.99
	8H	21.96	22.81	22.53	23.38	24.02	25.51	26.36	26.08	26.93	27.56
	12H	22.07	22.84	22.66	23.44	24.07	26.17	26.94	26.76	27.54	28.18
8H	4H	21.87	22.72	22.44	23.29	23.92	23.93	24.78	24.50	25.35	25.98
	6H	22.56	23.28	23.17	23.90	24.53	25.31	26.03	25.92	26.65	27.28
	8H	22.82	23.46	23.43	24.09	24.74	26.05	26.70	26.67	27.32	27.97
	12H	23.00	23.58	23.62	24.19	24.91	26.88	27.46	27.49	28.07	28.78
12H	4H	22.01	22.78	22.60	23.38	24.01	23.95	24.72	24.54	25.32	25.95
	6H	22.78	23.43	23.39	24.05	24.70	25.36	26.01	25.98	26.64	27.29
	8H	23.11	23.69	23.73	24.30	25.02	26.17	26.75	26.78	27.36	28.08