

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P334153

Luminaire Tested: **S124DW-S1020D935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334153  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DW-S1020D935-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 1020 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3342.9 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

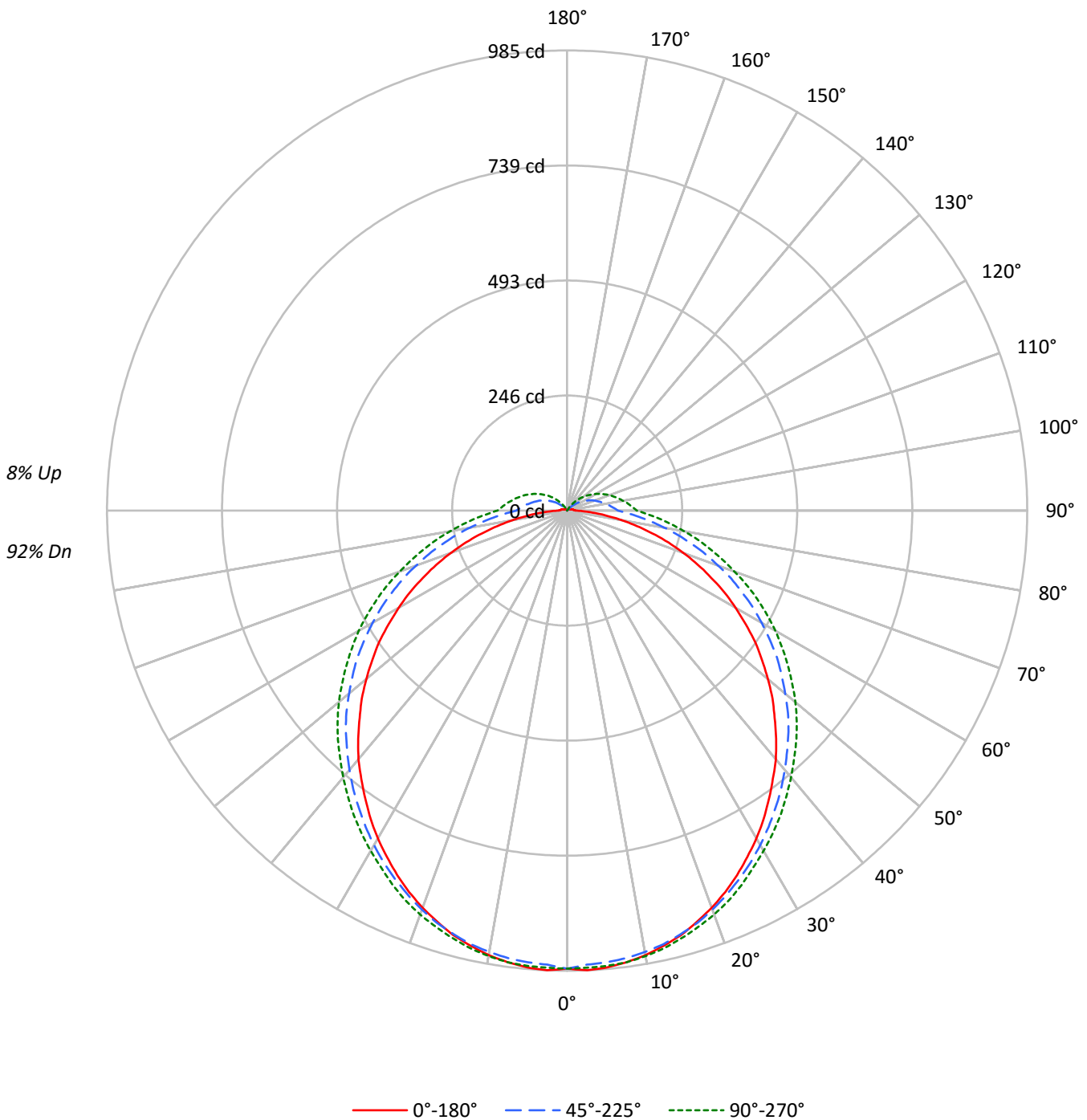
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	87	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	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	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	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

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

	0°	45°	90°
0°	7916	7916	7916
5°	7955	7866	7928
10°	7920	7866	7938
15°	7865	7846	7920
20°	7772	7810	7905
25°	7668	7756	7873
30°	7553	7707	7841
35°	7423	7661	7845
40°	7324	7637	7856
45°	7170	7647	7922
50°	7047	7654	8012
55°	6923	7712	8113
60°	6718	7765	8315
65°	6502	7885	8579
70°	6246	8113	8993
75°	5892	8596	9863
80°	5565	9851	11790
85°	5391	14237	18303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.9	2.8
10°-20°	266.2	8.0
20°-30°	402.5	12.0
30°-40°	486.9	14.6
40°-50°	514.8	15.4
50°-60°	484.5	14.5
60°-70°	402.0	12.0
70°-80°	282.1	8.4
80°-90°	159.1	4.8
90°-100°	94.7	2.8
100°-110°	70.1	2.1
110°-120°	47.1	1.4
120°-130°	26.5	0.8
130°-140°	11.5	0.3
140°-150°	2.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	761.6	22.8
0°-40°	1248.5	37.3
0°-60°	2247.7	67.2
0°-90°	3090.8	92.5
90°-120°	211.9	6.3
90°-150°	252.1	7.5
90°-180°	252.0	7.5
0°-180°	3342.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	980	980	980	980	980	
5°	982	978	971	979	978	93
15°	941	942	939	949	948	265
25°	861	867	871	883	884	397
35°	753	766	777	793	796	472
45°	628	649	670	688	694	485
55°	492	515	548	570	576	438
65°	340	376	413	440	449	337
75°	189	230	276	306	316	201
85°	58	104	154	187	198	61
90°	18	62	109	140	149	12
95°	14	50	96	125	135	11
105°	10	32	72	100	109	11
115°	7	16	52	76	83	7
125°	4	3	31	52	58	4
135°	2	2	10	27	34	2
145°	1	0	0	7	11	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: P334153

CATALOG NUMBER: S124DW-S1020D935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	980.5	980.5	980.5	980.5	980.5
2.5°	984.9	981.6	972.8	980.5	979.4
5°	981.6	978.3	970.6	979.4	978.3
7.5°	975.0	972.8	966.2	976.1	975.0
10°	966.2	965.1	959.6	969.5	968.4
12.5°	954.1	954.1	950.9	959.6	959.6
15°	941.0	942.1	938.8	948.7	947.6
17.5°	923.4	926.7	925.6	935.5	934.4
20°	904.7	908.0	909.1	920.1	920.1
22.5°	883.9	888.3	890.5	901.4	903.6
25°	860.8	867.4	870.7	882.8	883.9
27.5°	835.6	845.4	849.8	860.8	861.9
30°	810.3	819.1	826.8	838.9	841.1
32.5°	782.9	793.8	802.6	816.9	819.1
35°	753.2	766.4	777.4	792.7	796.0
37.5°	723.6	738.9	752.1	767.5	770.8
40°	695.0	709.3	724.7	741.1	745.5
42.5°	662.1	678.6	697.2	715.9	719.2
45°	628.0	648.9	669.8	688.4	693.9
47.5°	596.2	617.1	641.2	659.9	666.5
50°	561.1	585.2	609.4	631.3	637.9
52.5°	525.9	550.1	578.6	600.6	607.2
55°	491.9	515.0	547.9	569.9	576.4
57.5°	453.5	482.0	513.9	540.2	545.7
60°	416.1	444.7	480.9	506.2	515.0
62.5°	379.9	411.7	448.0	473.2	482.0
65°	340.4	375.5	412.8	440.3	449.1
67.5°	303.0	340.4	379.9	407.4	416.1
70°	264.6	301.9	343.7	373.3	381.0
72.5°	227.3	265.7	310.7	339.3	348.1
75°	188.9	229.5	275.6	306.3	316.2
77.5°	152.6	195.4	243.8	274.5	285.5
80°	119.7	163.6	211.9	244.9	253.6
82.5°	86.7	132.9	181.2	215.2	225.1
85°	58.2	104.3	153.7	186.7	197.6
87.5°	36.2	81.3	129.6	161.4	171.3
90°	17.6	61.5	108.7	140.5	149.3
92.5°	16.5	54.9	102.1	132.9	141.6
95°	14.3	50.5	95.5	125.2	135.1
97.5°	13.2	45.0	90.0	118.6	128.5
100°	12.1	40.6	83.4	113.1	120.8
102.5°	12.1	36.2	78.0	106.5	115.3
105°	9.9	31.8	72.5	99.9	108.7
107.5°	9.9	28.5	67.0	94.4	102.1
110°	8.8	24.2	62.6	87.8	96.6



TEST NUMBER: P334153

CATALOG NUMBER: S124DW-S1020D935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.7	20.9	57.1	81.3	90.0
115°	6.6	16.5	51.6	75.8	83.4
117.5°	6.6	13.2	46.1	69.2	78.0
120°	5.5	8.8	40.6	62.6	71.4
122.5°	5.5	5.5	35.1	57.1	64.8
125°	4.4	3.3	30.7	51.6	58.2
127.5°	4.4	3.3	25.3	45.0	52.7
130°	3.3	2.2	19.8	39.5	46.1
132.5°	3.3	2.2	15.4	34.0	40.6
135°	2.2	2.2	9.9	27.4	34.0
137.5°	2.2	1.1	5.5	22.0	27.4
140°	2.2	1.1	2.2	16.5	22.0
142.5°	1.1	1.1	0.0	12.1	16.5
145°	1.1	0.0	0.0	6.6	11.0
147.5°	1.1	0.0	0.0	1.1	5.5
150°	1.1	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

(END OF REPORT)