

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: P199465

Luminaire Tested: **S124-DIP-U1-1-30-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199465  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28062)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124-DIP-U1-1-30-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL1-3000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL1-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5674.4 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

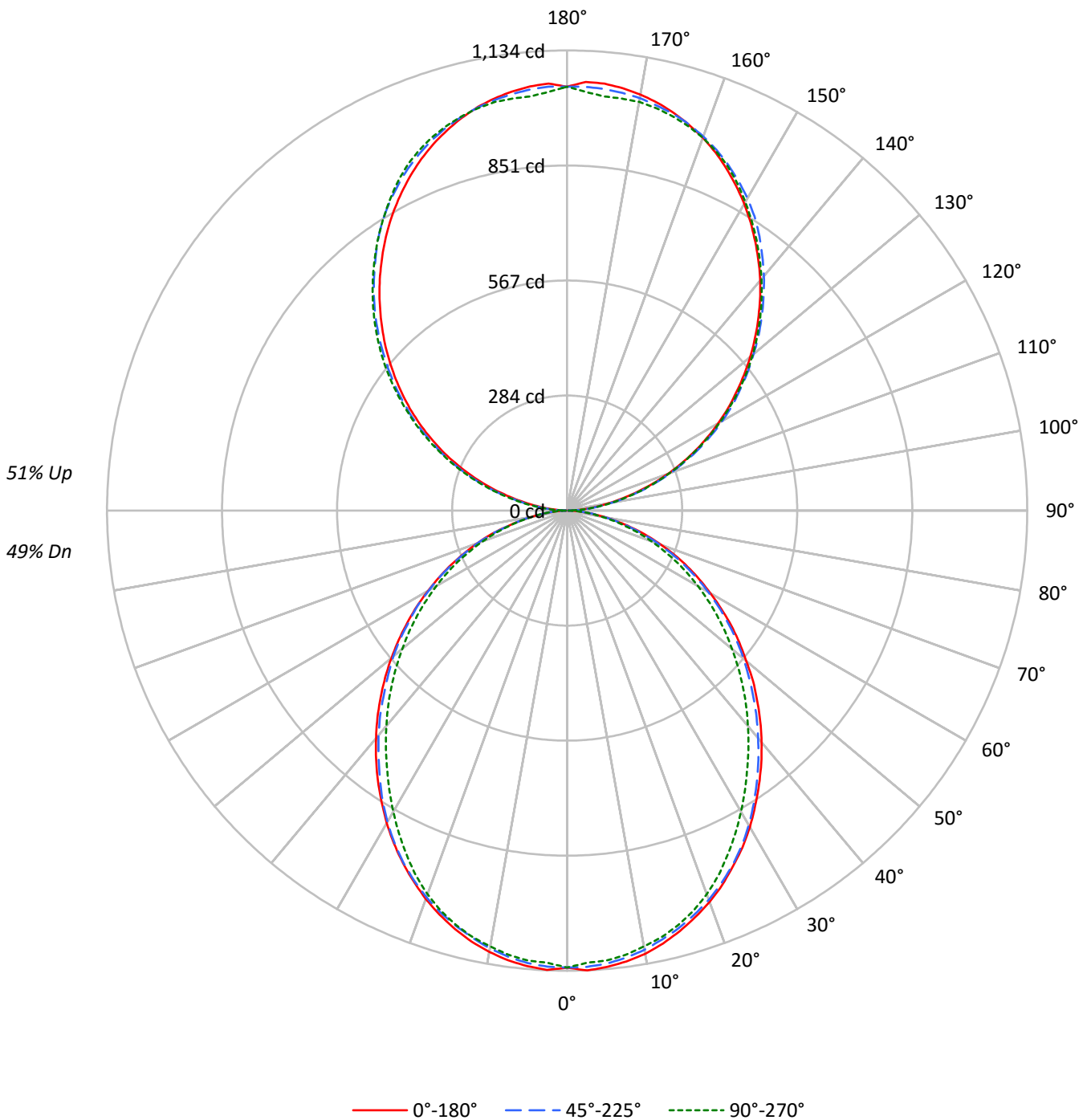
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	93	90	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	82	76	70	82	75	70	66	64	60	57	53	50	48	43	41	40	35
3	81	72	65	59	75	66	60	55	56	52	48	47	44	41	38	36	34	30
4	74	64	56	50	68	59	52	47	50	45	41	42	38	35	34	32	29	26
5	68	57	49	43	63	53	45	40	45	39	35	38	34	30	31	28	26	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	27	28	25	23	20
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	17
8	54	42	34	29	50	39	32	27	34	28	24	28	24	21	24	20	18	16
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13

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

	0°	90°	180°
0°	8906	8906	8906
5°	8890	8045	8874
10°	8764	7309	8727
15°	8574	6651	8530
20°	8355	6009	8294
25°	8090	5358	8015
30°	7811	4745	7711
35°	7479	4180	7374
40°	7146	3681	7022
45°	6785	3221	6653
50°	6380	2788	6267
55°	6016	2384	5859
60°	5565	1998	5407
65°	5120	1620	4917
70°	4551	1247	4337
75°	3828	876	3548
80°	2875	534	2692
85°	1687	236	1598



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.0	1.9
10°-20°	298.9	5.3
20°-30°	437.9	7.7
30°-40°	501.8	8.8
40°-50°	494.7	8.7
50°-60°	426.4	7.5
60°-70°	310.9	5.5
70°-80°	169.6	3.0
80°-90°	44.5	0.8
90°-100°	53.8	0.9
100°-110°	194.7	3.4
110°-120°	344.7	6.1
120°-130°	458.3	8.1
130°-140°	515.3	9.1
140°-150°	506.7	8.9
150°-160°	427.6	7.5
160°-170°	283.7	5.0
170°-180°	98.9	1.7
0°-30°	842.8	14.9
0°-40°	1344.6	23.7
0°-60°	2265.8	39.9
0°-90°	2790.8	49.2
90°-120°	593.2	10.5
90°-150°	2073.5	36.5
90°-180°	2884.0	50.8
0°-180°	5674.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1126	1126	1126	1126	1126	
5°	1129	1121	1113	1119	1127	107
15°	1073	1065	1057	1059	1068	302
25°	967	964	936	956	958	445
35°	824	816	774	804	813	516
45°	662	649	612	638	650	511
55°	494	485	451	475	481	440
65°	328	320	296	312	314	324
75°	168	162	149	155	156	179
85°	38	39	36	37	36	43
90°	1	3	2	3	1	6
95°	45	50	48	46	35	49
105°	180	189	186	182	168	191
115°	348	357	351	346	333	344
125°	509	521	516	509	494	456
135°	666	679	673	666	646	514
145°	808	826	814	813	789	506
155°	929	940	936	929	912	428
165°	1014	1012	1006	1005	1002	286
175°	1056	1043	1025	1042	1049	100
180°	1044	1044	1044	1044	1044	



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CATALOG NUMBER: S124-DIP-U1-1-30-X-X0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1
2.5°	1134.3	1121.3	1125.4	1122.7	1115.2	1122.7	1124.7	1120.6	1132.9
5°	1128.8	1116.6	1120.6	1116.6	1113.2	1115.9	1119.3	1114.5	1126.8
7.5°	1120.6	1107.7	1111.1	1107.7	1104.3	1107.0	1109.1	1105.0	1117.9
10°	1109.1	1095.5	1098.9	1094.8	1090.7	1093.4	1095.5	1091.4	1104.3
12.5°	1092.7	1079.8	1082.5	1079.8	1076.4	1077.1	1078.4	1074.4	1088.0
15°	1073.0	1060.1	1064.8	1062.1	1057.3	1060.1	1059.4	1054.6	1067.5
17.5°	1050.5	1038.3	1043.7	1041.0	1034.2	1038.3	1038.3	1030.8	1044.4
20°	1026.0	1013.1	1020.6	1013.8	1006.3	1010.4	1013.8	1004.9	1018.5
22.5°	998.8	985.2	994.0	981.8	973.6	978.4	986.5	977.0	989.2
25°	966.8	955.9	964.1	947.0	936.1	943.0	955.9	946.4	957.9
27.5°	935.5	924.6	931.4	912.3	897.3	906.2	922.5	914.4	924.6
30°	900.7	891.9	895.3	872.8	857.2	866.7	885.8	881.0	889.2
32.5°	862.6	855.8	855.8	832.0	815.6	826.5	847.0	845.6	851.0
35°	824.5	820.4	815.6	789.8	774.1	784.3	804.1	809.5	812.9
37.5°	785.7	783.0	774.1	748.9	733.9	744.8	763.2	771.4	773.4
40°	745.5	744.1	731.9	708.1	693.1	704.0	723.0	733.3	732.6
42.5°	704.7	706.0	691.0	667.9	652.9	663.8	681.5	695.1	691.7
45°	662.4	666.5	648.8	627.7	612.1	623.6	637.9	655.0	649.5
47.5°	621.6	626.4	608.0	586.2	571.2	583.5	597.8	616.2	608.0
50°	575.3	584.8	567.1	545.3	530.4	541.9	559.0	574.6	565.1
52.5°	535.1	541.9	526.3	505.2	490.9	500.4	517.4	533.1	522.9
55°	493.6	501.1	485.4	464.3	450.7	460.2	475.2	490.9	480.7
57.5°	450.0	457.5	443.2	424.2	411.2	421.4	437.1	448.0	438.5
60°	407.8	417.3	401.7	383.3	372.4	380.6	392.8	405.8	396.2
62.5°	367.0	375.8	360.8	343.8	333.6	341.1	354.0	364.2	355.4
65°	327.5	332.9	320.0	304.3	295.5	300.2	311.8	323.4	314.5
67.5°	287.3	292.8	279.8	266.2	257.4	262.1	271.7	282.5	274.4
70°	246.5	251.2	240.3	228.1	220.6	225.4	234.2	242.4	234.9
72.5°	207.7	211.1	200.8	191.3	185.9	189.3	195.4	202.9	199.5
75°	168.2	172.3	162.0	153.9	149.1	150.5	155.2	161.4	155.9
77.5°	130.7	134.8	126.6	120.5	117.8	118.5	121.9	126.6	119.8
80°	96.0	99.4	94.6	89.2	86.5	87.8	89.9	92.6	89.9
82.5°	64.7	68.1	64.7	61.3	59.2	60.6	61.3	62.6	60.6
85°	38.1	40.8	38.8	36.8	36.1	36.1	36.8	38.1	36.1
87.5°	17.0	19.1	17.7	16.3	14.3	15.0	15.7	17.0	15.7
90°	1.4	3.4	2.7	2.0	2.0	2.0	2.7	3.4	1.4
92.5°	20.4	23.1	23.8	21.8	21.8	21.1	19.7	19.1	12.3
95°	44.9	49.0	49.7	49.7	48.3	47.0	45.6	42.2	34.7
97.5°	72.8	77.6	79.0	77.6	78.3	76.9	73.5	70.1	62.6
100°	104.8	111.0	112.3	111.0	111.7	108.3	106.9	103.5	94.6
102.5°	140.3	147.7	148.4	147.1	147.1	144.3	143.0	138.9	130.0
105°	180.4	188.6	189.3	186.5	186.5	183.8	182.5	178.4	168.2
107.5°	221.3	229.4	229.4	226.7	226.7	224.7	222.0	219.2	209.0
110°	263.5	270.3	271.7	268.2	267.6	265.5	262.8	258.7	249.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	305.7	312.5	313.9	309.8	309.1	305.0	304.3	299.6	290.7
115°	347.9	354.7	356.8	352.0	350.6	345.9	345.9	341.1	332.9
117.5°	388.8	396.9	399.0	393.5	392.8	388.8	386.0	381.9	373.1
120°	429.6	439.8	441.2	435.1	434.4	429.6	428.2	422.8	413.9
122.5°	470.5	480.7	482.7	477.3	475.2	469.1	468.4	463.6	454.1
125°	509.3	520.8	520.8	518.1	516.1	511.3	508.6	503.1	493.6
127.5°	549.4	561.7	561.0	559.0	556.9	550.1	548.1	542.6	532.4
130°	588.9	599.8	599.8	598.5	597.1	591.0	587.6	582.1	570.5
132.5°	627.7	638.6	640.0	636.6	635.2	627.0	627.7	620.9	609.3
135°	665.9	675.4	678.8	673.3	672.7	663.8	666.5	657.7	646.1
137.5°	703.3	710.8	716.9	710.1	709.4	700.6	704.7	693.1	682.9
140°	740.1	746.2	754.4	746.2	744.8	736.7	740.7	728.5	719.6
142.5°	774.8	780.2	790.4	781.6	779.6	772.1	776.8	762.5	754.4
145°	808.1	812.2	825.8	816.3	813.6	806.8	812.9	795.2	789.1
147.5°	841.5	843.6	859.2	850.4	846.3	840.8	847.0	827.2	822.4
150°	872.8	872.8	888.5	881.7	878.3	872.1	876.2	857.2	853.8
152.5°	902.1	900.7	915.0	911.0	908.9	902.1	903.5	885.8	883.7
155°	929.3	926.6	939.5	937.5	936.1	929.3	929.3	911.6	912.3
157.5°	955.2	949.8	962.0	961.3	958.6	953.2	951.8	936.1	938.2
160°	977.7	972.9	981.1	979.7	977.7	972.2	972.2	958.6	962.0
162.5°	997.4	991.3	998.1	994.0	993.3	987.2	989.9	978.4	983.1
165°	1014.4	1008.3	1011.7	1006.3	1005.6	1000.1	1004.9	996.7	1002.2
167.5°	1029.4	1022.6	1021.9	1017.2	1015.8	1011.7	1017.2	1012.4	1018.5
170°	1041.0	1034.2	1032.1	1024.0	1022.6	1019.2	1027.4	1026.0	1031.5
172.5°	1049.8	1043.0	1038.3	1028.7	1024.0	1024.7	1035.5	1035.5	1041.7
175°	1056.0	1048.5	1043.0	1033.5	1024.7	1030.1	1041.7	1042.4	1049.2
177.5°	1057.3	1049.8	1045.1	1036.2	1032.8	1033.5	1045.8	1045.8	1053.2
180°	1044.4	1044.4	1044.4	1044.4	1044.4	1044.4	1044.4	1044.4	1044.4

(END OF REPORT)