

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: P199398

Luminaire Tested: **S122-DIP-U1-LO-35-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199398  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27883)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIP-U1-LO-35-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL1-3500K, SATIN WHITE DIFFUSER  
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4104.1 lumens  
Efficiency: N/A  
Efficacy: 105.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: Semi-Indirect

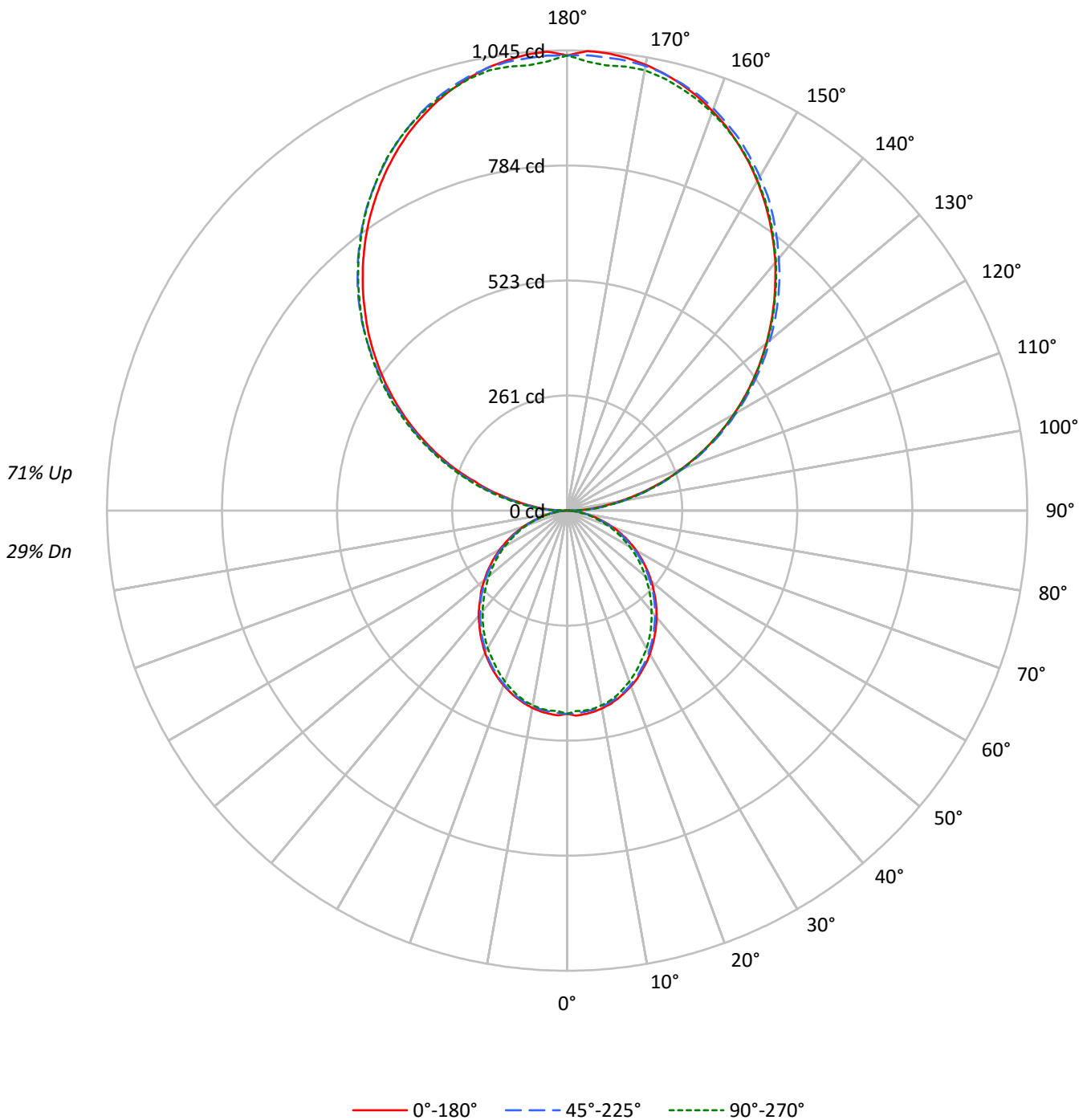
Input Watts (W): 38.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	72	72	72	53	53	53	37	37	37	29
1	93	89	85	82	83	80	77	74	63	61	59	47	46	44	33	32	31	24
2	85	78	72	67	76	70	65	61	55	51	49	41	39	37	29	27	26	20
3	77	68	61	56	69	61	55	51	48	44	41	36	34	31	25	24	22	17
4	71	60	53	47	63	54	48	43	43	38	35	32	29	27	23	21	19	15
5	65	53	46	40	58	48	42	36	38	33	30	29	26	23	20	18	17	13
6	59	48	40	34	53	43	36	32	34	29	26	26	23	20	18	16	15	11
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10
8	51	39	31	26	45	35	29	24	28	23	20	22	18	16	15	13	12	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

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

	0°	90°	180°
0°	7299	7299	7299
5°	7308	6046	7297
10°	7208	5163	7191
15°	7073	4441	7044
20°	6912	3821	6876
25°	6719	3297	6684
30°	6525	2866	6469
35°	6286	2480	6228
40°	6056	2133	6000
45°	5812	1825	5709
50°	5540	1548	5423
55°	5239	1296	5151
60°	4929	1063	4803
65°	4552	835	4396
70°	4084	627	3888
75°	3409	423	3186
80°	2545	246	2306
85°	1576	97	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	1.1
10°-20°	123.2	3.0
20°-30°	181.7	4.4
30°-40°	211.8	5.2
40°-50°	212.3	5.2
50°-60°	185.7	4.5
60°-70°	136.6	3.3
70°-80°	74.1	1.8
80°-90°	19.0	0.5
90°-100°	71.5	1.7
100°-110°	210.3	5.1
110°-120°	353.7	8.6
120°-130°	461.3	11.2
130°-140°	514.3	12.5
140°-150°	502.9	12.3
150°-160°	423.1	10.3
160°-170°	281.2	6.9
170°-180°	97.9	2.4
0°-30°	348.3	8.5
0°-40°	560.2	13.6
0°-60°	958.2	23.3
0°-90°	1187.8	28.9
90°-120°	635.5	15.5
90°-150°	2114.1	51.5
90°-180°	2916.0	71.1
0°-180°	4104.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	462	462	462	462	462	
5°	464	459	456	458	463	44
15°	443	439	435	438	441	125
25°	402	398	387	396	399	185
35°	346	342	331	339	343	217
45°	284	279	265	276	279	219
55°	215	211	198	207	211	192
65°	146	140	130	136	141	144
75°	75	71	65	67	70	80
85°	18	17	14	15	15	20
90°	1	2	2	2	0	7
95°	60	69	68	65	56	62
105°	197	206	203	196	185	208
115°	358	363	358	353	345	353
125°	515	523	516	513	503	460
135°	664	677	666	669	651	512
145°	802	815	805	806	789	502
155°	919	929	920	919	907	423
165°	1002	1004	994	999	994	283
175°	1042	1033	1015	1031	1040	99
180°	1034	1034	1034	1034	1034	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5
2.5°	466.1	459.7	460.8	459.3	455.8	459.0	460.4	459.3	465.4
5°	464.0	457.5	458.6	456.8	455.8	456.8	458.3	456.8	463.3
7.5°	461.1	454.0	456.1	455.0	454.0	454.7	455.8	453.3	460.0
10°	456.1	449.0	452.2	450.1	449.0	449.7	451.5	447.9	455.0
12.5°	450.4	443.3	446.5	444.0	442.9	442.9	446.1	442.2	448.6
15°	442.6	436.8	439.0	436.5	434.7	435.8	438.3	435.4	440.8
17.5°	433.6	428.6	431.1	427.2	424.0	426.5	430.1	426.9	432.2
20°	424.4	418.6	421.1	415.8	412.9	415.1	419.7	417.2	422.2
22.5°	414.0	408.7	410.8	403.7	400.8	402.6	409.4	406.9	411.5
25°	401.5	397.2	397.6	390.4	387.2	389.4	396.5	395.1	399.4
27.5°	389.4	385.1	385.5	377.2	373.7	376.5	383.7	382.6	386.5
30°	376.2	372.2	371.9	363.7	360.8	362.6	369.7	369.7	373.0
32.5°	361.5	358.3	356.5	349.0	346.2	348.3	354.4	355.5	358.0
35°	346.5	344.4	341.9	334.8	330.8	333.7	339.4	340.8	343.3
37.5°	331.6	329.1	326.2	319.1	314.8	318.4	323.4	325.8	327.6
40°	315.9	314.1	310.9	303.7	298.4	301.9	307.6	310.5	313.0
42.5°	299.8	298.7	294.8	287.3	282.0	285.9	291.9	294.4	295.5
45°	283.7	282.3	278.7	270.9	265.2	269.5	275.9	278.4	278.7
47.5°	265.9	266.2	262.0	254.1	248.4	252.7	258.4	262.0	263.4
50°	249.8	250.2	245.2	237.3	231.6	234.8	241.6	245.2	244.5
52.5°	232.7	233.8	228.4	220.6	214.9	218.1	224.8	228.8	229.1
55°	214.9	216.6	210.9	203.1	198.1	201.3	207.0	211.6	211.3
57.5°	197.7	199.2	193.4	186.3	181.3	184.2	189.2	195.2	193.8
60°	180.6	182.0	176.0	168.8	164.5	166.0	171.7	176.7	176.0
62.5°	163.1	164.5	158.1	151.7	146.7	148.8	153.8	159.9	158.1
65°	145.6	146.7	139.9	134.2	129.9	132.1	135.6	142.0	140.6
67.5°	128.1	128.8	122.8	117.4	113.9	114.9	118.1	123.5	122.8
70°	110.6	111.4	105.6	100.6	97.4	98.5	101.0	106.0	105.3
72.5°	92.8	93.9	88.2	83.5	80.3	81.4	83.2	87.8	86.7
75°	74.9	75.7	71.4	67.8	65.0	65.3	66.7	70.3	70.0
77.5°	58.5	60.3	55.7	52.5	50.3	50.7	52.5	54.2	53.5
80°	42.5	44.6	41.4	38.9	37.1	36.8	38.2	39.6	38.5
82.5°	30.0	30.3	28.2	26.4	24.6	24.6	25.7	26.8	25.7
85°	17.8	18.6	16.8	15.3	14.3	13.9	14.6	15.7	15.0
87.5°	8.6	8.9	7.1	6.4	5.4	5.0	5.4	6.1	6.1
90°	0.7	1.8	1.8	2.1	2.5	2.5	2.1	2.1	0.4
92.5°	37.5	41.7	43.8	42.4	41.7	39.6	39.6	37.5	33.3
95°	59.7	66.0	68.8	68.1	68.1	65.3	64.6	62.5	56.3
97.5°	88.2	95.2	97.2	97.9	97.2	93.8	91.7	89.6	82.7
100°	120.9	127.8	129.9	129.9	129.2	125.7	122.9	120.2	112.5
102.5°	157.0	163.9	166.0	164.6	164.6	159.8	157.0	154.9	146.6
105°	197.3	204.2	205.6	203.5	202.8	198.0	195.9	193.1	185.4
107.5°	236.2	243.1	242.4	241.7	238.9	235.5	234.1	229.9	220.2
110°	276.4	285.5	282.0	280.6	277.8	274.4	273.0	271.6	263.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	316.7	326.4	322.3	320.9	317.4	313.2	313.2	312.6	304.9
115°	357.7	367.4	363.3	360.5	357.7	353.5	352.8	353.5	345.2
117.5°	397.3	408.4	403.5	400.1	397.3	392.4	393.1	394.5	385.5
120°	436.9	449.4	443.8	439.7	437.6	432.0	432.7	435.5	425.1
122.5°	475.8	488.3	483.4	479.3	477.2	470.9	472.3	473.7	464.0
125°	514.7	527.2	523.0	518.1	516.1	511.9	512.6	512.6	502.9
127.5°	552.9	565.4	562.6	557.0	554.3	548.7	551.5	549.4	541.1
130°	590.4	602.2	600.8	594.5	592.5	589.0	591.1	584.8	578.6
132.5°	627.2	639.0	639.7	632.7	630.0	626.5	630.7	623.7	615.4
135°	664.0	674.4	677.2	669.6	666.1	663.3	668.9	657.8	650.8
137.5°	699.4	707.8	714.0	705.0	702.2	697.3	704.3	693.2	686.9
140°	735.5	742.5	748.0	741.1	737.6	733.5	739.0	727.9	721.7
142.5°	768.9	776.5	782.1	775.1	771.0	767.5	773.1	761.2	755.7
145°	802.2	808.5	815.4	809.2	805.0	801.5	806.4	794.6	789.0
147.5°	833.5	839.0	847.4	840.4	836.3	833.5	837.0	825.1	820.3
150°	864.0	866.8	875.2	871.0	865.4	862.7	865.4	855.0	850.8
152.5°	892.5	894.6	902.2	897.4	894.6	889.7	893.2	882.8	880.0
155°	918.9	919.6	928.6	923.1	919.6	916.1	918.9	910.6	907.1
157.5°	943.9	943.9	950.2	947.4	941.8	940.4	942.5	933.5	932.8
160°	965.4	964.1	971.7	966.8	962.0	960.6	964.1	955.7	955.0
162.5°	985.6	982.8	989.8	983.5	979.3	977.9	982.8	975.2	975.9
165°	1002.3	998.8	1004.3	998.1	993.9	993.2	998.8	991.1	993.9
167.5°	1016.8	1011.3	1016.1	1009.9	1006.4	1005.7	1012.0	1005.0	1009.2
170°	1028.0	1021.0	1025.2	1016.8	1015.5	1014.1	1021.7	1015.5	1022.4
172.5°	1037.0	1029.3	1030.7	1021.7	1016.8	1019.6	1028.0	1024.5	1032.1
175°	1042.5	1034.2	1032.8	1023.1	1014.8	1021.0	1031.4	1030.7	1039.8
177.5°	1044.6	1037.0	1034.9	1023.8	1021.0	1022.4	1034.2	1034.9	1043.2
180°	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5

(END OF REPORT)