

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: P199397

Luminaire Tested: **S122-DIP-U1-LO-30-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199397  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27986)  
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-30-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL1-3000K, NO LENS  
DOWNLIGHT LLO-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4498.7 lumens  
Efficiency: N/A  
Efficacy: 115.9 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

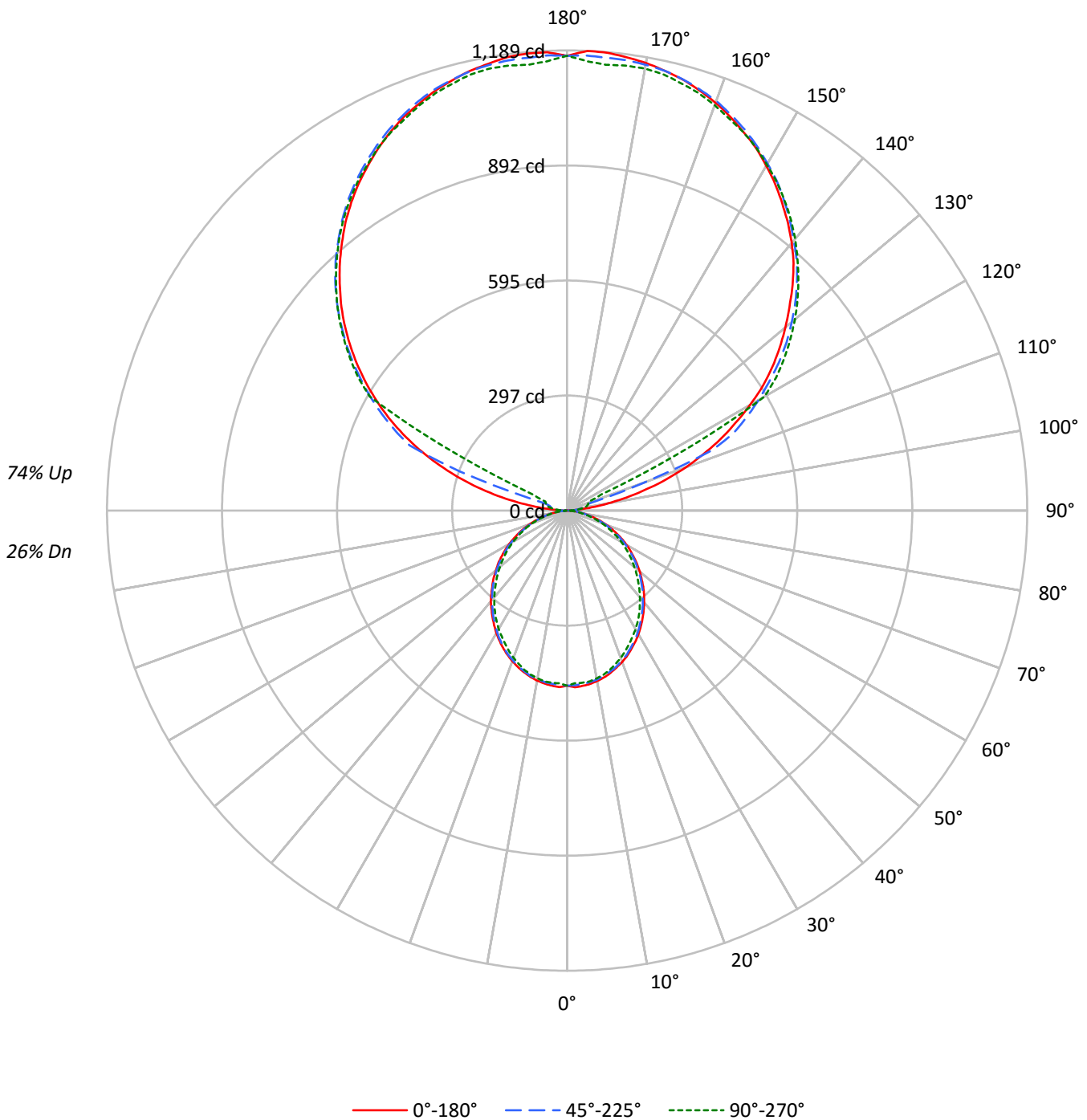
Input Watts (W): 38.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	88	85	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22
2	84	77	71	66	75	69	64	60	54	50	47	39	37	35	26	25	24	18
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16
4	70	60	52	46	62	54	47	42	42	37	34	31	28	26	21	19	18	13
5	64	53	45	40	57	48	41	36	37	33	29	28	25	22	19	17	15	12
6	59	47	40	34	52	43	36	31	33	29	25	25	22	19	17	15	13	10
7	54	43	35	30	48	38	32	27	30	25	22	23	19	17	15	13	12	9
8	50	39	31	26	45	35	28	24	27	23	19	21	17	15	14	12	11	8
9	47	35	28	23	42	32	25	21	25	20	17	19	16	13	13	11	10	7
10	44	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	9	7

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

	0°	90°	180°
0°	7154	7154	7154
5°	7163	5926	7152
10°	7066	5060	7049
15°	6932	4353	6905
20°	6775	3746	6741
25°	6587	3233	6552
30°	6394	2810	6341
35°	6163	2431	6105
40°	5935	2091	5881
45°	5697	1789	5597
50°	5431	1517	5314
55°	5134	1271	5049
60°	4831	1042	4708
65°	4462	818	4308
70°	4006	615	3811
75°	3345	414	3122
80°	2491	241	2264
85°	1549	95	1301



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	0.9
10°-20°	120.7	2.7
20°-30°	178.1	4.0
30°-40°	207.7	4.6
40°-50°	208.1	4.6
50°-60°	182.0	4.0
60°-70°	133.9	3.0
70°-80°	72.6	1.6
80°-90°	18.6	0.4
90°-100°	28.9	0.6
100°-110°	132.0	2.9
110°-120°	383.6	8.5
120°-130°	599.4	13.3
130°-140°	646.2	14.4
140°-150°	610.7	13.6
150°-160°	498.0	11.1
160°-170°	324.1	7.2
170°-180°	111.7	2.5
0°-30°	341.5	7.6
0°-40°	549.1	12.2
0°-60°	939.2	20.9
0°-90°	1164.3	25.9
90°-120°	544.5	12.1
90°-150°	2400.7	53.4
90°-180°	3334.0	74.1
0°-180°	4498.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	452	452	452	452	452	
5°	455	450	447	449	454	43
15°	434	430	426	430	432	122
25°	394	390	380	389	392	181
35°	340	335	324	333	336	213
45°	278	273	260	270	273	214
55°	211	207	194	203	207	189
65°	143	137	127	133	138	141
75°	74	70	64	65	69	78
85°	18	16	14	14	15	20
90°	1	2	2	2	0	2
95°	29	23	27	27	50	40
105°	212	45	54	46	249	225
115°	438	475	97	491	468	431
125°	648	668	684	679	664	577
135°	824	840	845	848	831	635
145°	969	978	979	984	972	607
155°	1079	1086	1078	1087	1080	498
165°	1153	1154	1142	1152	1151	325
175°	1187	1174	1156	1174	1185	113
180°	1175	1175	1175	1175	1175	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	452.3	452.3	452.3	452.3	452.3	452.3	452.3	452.3	452.3
2.5°	456.9	450.6	451.6	450.2	446.7	449.9	451.3	450.2	456.2
5°	454.8	448.5	449.5	447.8	446.7	447.8	449.2	447.8	454.1
7.5°	452.0	445.0	447.1	446.0	445.0	445.7	446.7	444.3	450.9
10°	447.1	440.1	443.3	441.2	440.1	440.8	442.6	439.1	446.0
12.5°	441.5	434.5	437.7	435.2	434.2	434.2	437.3	433.5	439.8
15°	433.8	428.2	430.3	427.9	426.1	427.2	429.6	426.8	432.1
17.5°	425.1	420.2	422.6	418.8	415.6	418.1	421.6	418.4	423.7
20°	416.0	410.4	412.8	407.6	404.8	406.9	411.4	409.0	413.9
22.5°	405.8	400.6	402.7	395.7	392.9	394.6	401.3	398.8	403.4
25°	393.6	389.4	389.7	382.7	379.6	381.7	388.7	387.3	391.5
27.5°	381.7	377.5	377.8	369.8	366.3	369.1	376.1	375.0	378.9
30°	368.7	364.9	364.5	356.5	353.7	355.4	362.4	362.4	365.6
32.5°	354.4	351.2	349.5	342.1	339.3	341.4	347.4	348.4	350.9
35°	339.7	337.6	335.1	328.2	324.3	327.1	332.7	334.1	336.5
37.5°	325.0	322.6	319.8	312.8	308.6	312.1	317.0	319.4	321.2
40°	309.6	307.9	304.7	297.7	292.5	296.0	301.6	304.4	306.8
42.5°	293.9	292.8	289.0	281.6	276.4	280.2	286.2	288.6	289.7
45°	278.1	276.7	273.2	265.5	259.9	264.1	270.4	272.9	273.2
47.5°	260.6	261.0	256.8	249.1	243.5	247.7	253.3	256.8	258.2
50°	244.9	245.2	240.3	232.6	227.0	230.2	236.8	240.3	239.6
52.5°	228.1	229.1	223.9	216.2	210.6	213.8	220.4	224.2	224.6
55°	210.6	212.4	206.8	199.1	194.2	197.3	202.9	207.5	207.1
57.5°	193.8	195.2	189.6	182.6	177.7	180.5	185.4	191.4	190.0
60°	177.0	178.4	172.5	165.5	161.3	162.7	168.3	173.2	172.5
62.5°	159.9	161.3	155.0	148.7	143.8	145.9	150.8	156.7	155.0
65°	142.7	143.8	137.1	131.5	127.3	129.4	132.9	139.2	137.8
67.5°	125.6	126.3	120.3	115.1	111.6	112.6	115.8	121.0	120.3
70°	108.5	109.2	103.6	98.7	95.5	96.6	99.0	103.9	103.2
72.5°	91.0	92.0	86.4	81.9	78.7	79.8	81.5	86.1	85.0
75°	73.5	74.2	70.0	66.5	63.7	64.0	65.4	68.9	68.6
77.5°	57.4	59.1	54.6	51.4	49.3	49.7	51.4	53.2	52.5
80°	41.6	43.7	40.6	38.1	36.4	36.0	37.4	38.8	37.8
82.5°	29.4	29.7	27.6	25.9	24.1	24.1	25.2	26.2	25.2
85°	17.5	18.2	16.4	15.0	14.0	13.6	14.3	15.4	14.7
87.5°	8.4	8.7	7.0	6.3	5.2	4.9	5.2	5.9	5.9
90°	0.7	1.7	1.7	2.1	2.4	2.4	2.1	2.1	0.3
92.5°	4.1	9.5	9.5	11.6	12.3	14.3	16.3	17.0	18.4
95°	28.6	20.4	23.1	25.2	26.6	28.6	27.2	25.2	49.7
97.5°	64.0	25.9	32.7	34.0	36.1	36.8	36.8	28.6	90.6
100°	106.9	30.0	38.8	44.3	45.6	45.6	41.5	64.0	139.6
102.5°	157.3	133.4	42.2	49.0	51.7	49.7	44.3	217.2	194.0
105°	211.7	240.3	44.9	51.7	54.5	53.1	46.3	267.6	249.2
107.5°	268.9	291.4	47.7	54.5	57.2	55.1	56.5	319.3	304.3
110°	326.1	345.2	213.8	56.5	59.2	56.5	296.2	371.7	359.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	380.6	400.3	401.7	59.9	60.6	64.7	440.5	424.8	414.6
115°	437.8	454.1	475.2	276.4	96.7	304.3	490.9	477.3	468.4
117.5°	490.2	505.9	522.2	486.1	370.4	529.0	539.2	529.0	520.2
120°	545.3	561.0	571.2	587.6	588.9	588.9	586.9	578.7	569.2
122.5°	599.8	610.0	618.2	634.5	640.0	633.9	632.5	625.0	617.5
125°	647.5	657.0	667.9	678.8	684.2	678.1	678.8	669.3	663.8
127.5°	692.4	700.6	714.9	721.7	727.1	720.3	723.0	712.8	708.7
130°	736.0	741.4	757.8	763.2	768.0	763.9	765.9	755.0	751.6
132.5°	778.9	786.4	800.0	802.0	807.5	801.3	808.8	793.8	792.5
135°	823.8	829.9	840.1	840.8	844.9	841.5	847.6	835.4	831.3
137.5°	866.0	868.7	877.6	874.9	881.0	875.5	884.4	872.1	869.4
140°	902.8	904.8	911.0	912.3	916.4	911.6	918.4	906.2	904.8
142.5°	936.8	939.5	945.0	944.3	949.1	944.3	952.5	941.6	940.2
145°	968.8	972.9	977.7	975.6	979.0	976.3	984.5	972.9	972.2
147.5°	1000.8	1002.2	1009.0	1005.6	1007.6	1004.2	1013.1	1003.5	1002.2
150°	1028.7	1031.5	1035.5	1031.5	1032.1	1030.1	1038.9	1030.8	1029.4
152.5°	1056.7	1056.0	1062.1	1053.9	1057.3	1053.9	1064.1	1056.0	1056.0
155°	1079.1	1078.4	1085.9	1077.1	1078.4	1075.7	1087.3	1077.8	1079.8
157.5°	1101.6	1098.2	1107.0	1098.2	1095.5	1097.5	1106.4	1097.5	1101.6
160°	1121.3	1117.9	1126.1	1116.6	1114.5	1115.9	1125.4	1117.2	1118.6
162.5°	1138.4	1133.6	1141.1	1130.9	1130.9	1128.8	1141.1	1132.9	1137.0
165°	1153.3	1147.9	1154.0	1143.8	1142.4	1141.1	1152.0	1146.5	1150.6
167.5°	1164.2	1158.8	1164.2	1152.6	1154.0	1151.3	1162.2	1158.8	1163.5
170°	1174.4	1167.6	1169.7	1159.5	1159.5	1157.4	1169.0	1165.6	1172.4
172.5°	1181.2	1173.8	1173.8	1162.2	1159.5	1160.8	1173.1	1172.4	1181.9
175°	1187.4	1177.2	1174.4	1163.5	1156.1	1162.9	1174.4	1176.5	1185.3
177.5°	1188.7	1179.2	1176.5	1164.2	1162.2	1162.9	1177.2	1177.8	1185.3
180°	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1	1175.1

(END OF REPORT)