

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: P199424

Luminaire Tested: **S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199424
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-ULO-1-40-X-X0048-1D-UDD-1-5-W
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LLO-4000K, SATIN WHITE DIFFUSER
DOWNLIGHT LL1-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3933.5 lumens
Efficiency: N/A
Efficacy: 98.1 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-Direct

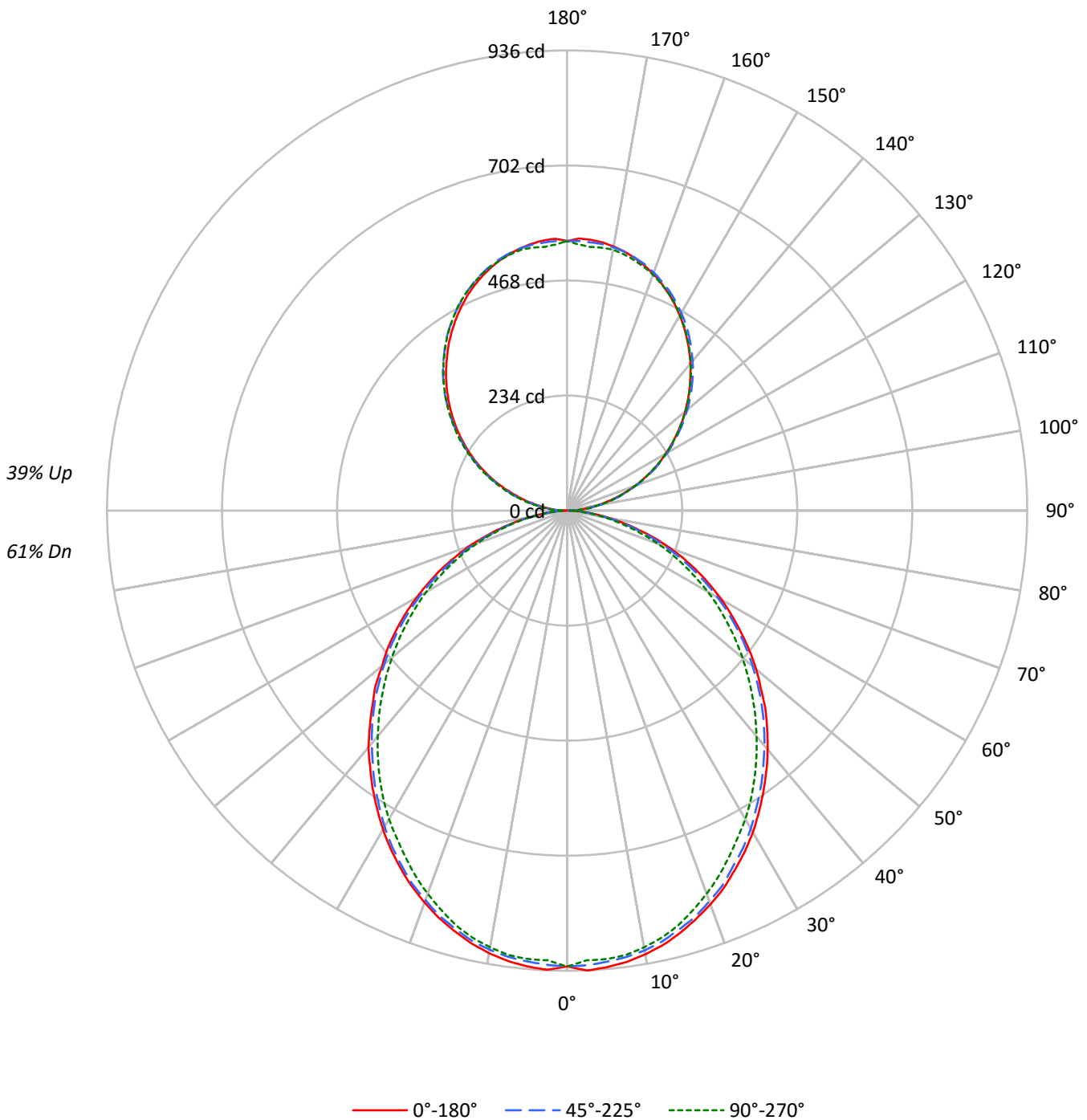
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P199424

CATALOG NUMBER: S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-5-W

Luminous Intensity Polar Plot





TEST NUMBER: P199424

CATALOG NUMBER: S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-5-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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	100	96	92	88	94	90	86	83	78	76	74	68	66	64	58	57	56	51
2	91	84	78	72	85	79	73	68	69	65	61	60	57	54	51	49	47	43
3	83	74	66	60	78	69	63	57	61	56	51	53	49	46	46	43	40	36
4	76	65	57	51	71	61	54	49	54	48	44	47	43	39	41	37	35	31
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	27
6	65	52	44	38	60	49	42	36	44	38	33	38	33	30	33	30	27	24
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	30	27	24	21
8	56	43	35	30	52	41	33	28	36	30	26	32	27	24	28	24	21	19
9	52	39	32	27	48	37	30	25	33	27	23	29	25	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	23	19	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14663	14663	14663
5°	14681	12146	14657
10°	14481	10372	14448
15°	14208	8921	14151
20°	13884	7677	13814
25°	13498	6625	13426
30°	13106	5758	12994
35°	12630	4982	12512
40°	12163	4285	12054
45°	11677	3666	11472
50°	11131	3110	10892
55°	10521	2604	10348
60°	9901	2135	9647
65°	9145	1677	8833
70°	8209	1260	7810
75°	6854	849	6394
80°	5109	494	4635
85°	3170	195	2665



TEST NUMBER: P199424

CATALOG NUMBER: S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-5-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.4	2.2
10°-20°	247.4	6.3
20°-30°	364.9	9.3
30°-40°	425.6	10.8
40°-50°	426.5	10.8
50°-60°	373.1	9.5
60°-70°	274.5	7.0
70°-80°	148.8	3.8
80°-90°	38.1	1.0
90°-100°	38.3	1.0
100°-110°	111.6	2.8
110°-120°	187.6	4.8
120°-130°	244.7	6.2
130°-140°	272.8	6.9
140°-150°	266.8	6.8
150°-160°	224.4	5.7
160°-170°	149.2	3.8
170°-180°	51.9	1.3
0°-30°	699.8	17.8
0°-40°	1125.4	28.6
0°-60°	1924.9	48.9
0°-90°	2386.3	60.7
90°-120°	337.5	8.6
90°-150°	1121.7	28.5
90°-180°	1547.0	39.3
0°-180°	3933.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	927	927	927	927	927	
5°	932	921	916	921	931	88
15°	889	882	873	880	886	251
25°	807	799	778	797	802	372
35°	696	687	665	682	690	436
45°	570	560	533	554	560	439
55°	432	424	398	416	424	387
65°	292	281	261	272	282	289
75°	151	143	130	134	140	160
85°	36	34	29	29	30	40
90°	1	4	5	4	1	5
95°	32	36	36	34	30	33
105°	105	109	108	104	98	110
115°	190	193	190	187	183	187
125°	273	277	274	272	267	244
135°	352	359	353	355	345	272
145°	426	432	427	428	418	266
155°	487	493	488	487	481	225
165°	532	533	527	530	527	150
175°	553	548	538	547	552	53
180°	548	548	548	548	548	



TEST NUMBER: P199424

CATALOG NUMBER: S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	927.1	927.1	927.1	927.1	927.1	927.1	927.1	927.1	927.1
2.5°	936.4	923.5	925.6	922.8	915.6	922.0	924.9	922.8	934.9
5°	932.1	919.2	921.3	917.7	915.6	917.7	920.6	917.7	930.6
7.5°	926.3	912.0	916.3	914.2	912.0	913.4	915.6	910.6	924.2
10°	916.3	902.0	908.4	904.1	902.0	903.4	907.0	899.8	914.2
12.5°	904.8	890.5	896.9	891.9	889.8	889.8	896.2	888.3	901.3
15°	889.1	877.6	881.9	876.9	873.3	875.4	880.5	874.7	885.5
17.5°	871.1	861.1	866.1	858.2	851.8	856.8	864.0	857.5	868.3
20°	852.5	841.0	846.0	835.3	829.6	833.9	843.2	838.2	848.2
22.5°	831.7	820.9	825.3	810.9	805.2	808.8	822.4	817.4	826.7
25°	806.6	798.0	798.7	784.4	777.9	782.2	796.6	793.7	802.3
27.5°	782.2	773.6	774.3	757.9	750.7	756.4	770.8	768.6	776.5
30°	755.7	747.8	747.1	730.6	724.9	728.5	742.8	742.8	749.2
32.5°	726.3	719.9	716.3	701.2	695.5	699.8	712.0	714.1	719.1
35°	696.2	691.9	686.9	672.5	664.6	670.4	681.9	684.7	689.7
37.5°	666.1	661.1	655.3	641.0	632.4	639.6	649.6	654.6	658.2
40°	634.5	630.9	624.5	610.2	599.4	606.6	618.0	623.8	628.8
42.5°	602.3	600.1	592.2	577.2	566.4	574.3	586.5	591.5	593.7
45°	570.0	567.1	560.0	544.2	532.7	541.3	554.2	559.2	560.0
47.5°	534.2	534.9	526.3	510.5	499.0	507.6	519.1	526.3	529.1
50°	501.9	502.6	492.6	476.8	465.3	471.8	485.4	492.6	491.1
52.5°	467.5	469.6	458.9	443.1	431.6	438.1	451.7	459.6	460.3
55°	431.6	435.2	423.7	408.0	397.9	404.4	415.9	425.2	424.5
57.5°	397.2	400.1	388.6	374.3	364.2	370.0	380.0	392.2	389.3
60°	362.8	365.7	353.5	339.1	330.5	333.4	344.9	354.9	353.5
62.5°	327.7	330.5	317.6	304.7	294.7	299.0	309.0	321.2	317.6
65°	292.5	294.7	281.1	269.6	261.0	265.3	272.5	285.4	282.5
67.5°	257.4	258.8	246.6	235.9	228.7	230.9	237.3	248.1	246.6
70°	222.3	223.7	212.2	202.2	195.7	197.9	202.9	212.9	211.5
72.5°	186.4	188.6	177.1	167.8	161.3	163.5	167.1	176.4	174.2
75°	150.6	152.0	143.4	136.2	130.5	131.2	134.1	141.2	140.5
77.5°	117.6	121.2	111.8	105.4	101.1	101.8	105.4	109.0	107.5
80°	85.3	89.6	83.2	78.2	74.6	73.8	76.7	79.6	77.4
82.5°	60.2	60.9	56.6	53.1	49.5	49.5	51.6	53.8	51.6
85°	35.8	37.3	33.7	30.8	28.7	28.0	29.4	31.5	30.1
87.5°	17.2	17.9	14.3	12.9	10.8	10.0	10.8	12.2	12.2
90°	1.4	3.6	3.6	4.3	5.0	5.0	4.3	4.3	0.7
92.5°	19.9	22.1	23.2	22.5	22.1	21.0	21.0	19.9	17.7
95°	31.7	35.0	36.5	36.1	36.1	34.6	34.3	33.2	29.8
97.5°	46.8	50.5	51.6	51.9	51.6	49.7	48.6	47.5	43.8
100°	64.1	67.8	68.9	68.9	68.5	66.7	65.2	63.7	59.7
102.5°	83.3	86.9	88.1	87.3	87.3	84.7	83.3	82.2	77.7
105°	104.6	108.3	109.1	107.9	107.6	105.0	103.9	102.4	98.4
107.5°	125.3	128.9	128.6	128.2	126.7	124.9	124.2	121.9	116.8
110°	146.6	151.4	149.6	148.8	147.4	145.5	144.8	144.1	140.0



TEST NUMBER: P199424

CATALOG NUMBER: S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	168.0	173.2	170.9	170.2	168.4	166.2	166.2	165.8	161.7
115°	189.7	194.9	192.7	191.2	189.7	187.5	187.2	187.5	183.1
117.5°	210.7	216.6	214.1	212.2	210.7	208.2	208.5	209.3	204.5
120°	231.7	238.4	235.4	233.2	232.1	229.2	229.5	231.0	225.5
122.5°	252.4	259.0	256.4	254.2	253.1	249.8	250.5	251.3	246.1
125°	273.0	279.6	277.4	274.8	273.7	271.5	271.9	271.9	266.7
127.5°	293.3	299.9	298.4	295.5	294.0	291.1	292.5	291.4	287.0
130°	313.2	319.4	318.7	315.4	314.3	312.4	313.5	310.2	306.9
132.5°	332.7	338.9	339.3	335.6	334.2	332.3	334.5	330.8	326.4
135°	352.2	357.7	359.2	355.2	353.3	351.8	354.8	348.9	345.2
137.5°	371.0	375.4	378.7	373.9	372.5	369.9	373.6	367.7	364.4
140°	390.2	393.8	396.8	393.1	391.3	389.1	392.0	386.1	382.8
142.5°	407.8	411.9	414.8	411.2	408.9	407.1	410.1	403.8	400.8
145°	425.5	428.8	432.5	429.2	427.0	425.2	427.7	421.5	418.5
147.5°	442.1	445.1	449.5	445.8	443.6	442.1	443.9	437.7	435.1
150°	458.3	459.8	464.2	462.0	459.1	457.6	459.1	453.5	451.3
152.5°	473.4	474.5	478.6	476.0	474.5	471.9	473.8	468.3	466.8
155°	487.4	487.8	492.6	489.6	487.8	485.9	487.4	483.0	481.2
157.5°	500.7	500.7	504.0	502.5	499.6	498.8	499.9	495.2	494.8
160°	512.1	511.4	515.4	512.8	510.3	509.5	511.4	506.9	506.6
162.5°	522.8	521.3	525.0	521.7	519.5	518.7	521.3	517.3	517.6
165°	531.6	529.8	532.7	529.4	527.2	526.8	529.8	525.7	527.2
167.5°	539.4	536.4	539.0	535.7	533.8	533.5	536.8	533.1	535.3
170°	545.3	541.6	543.8	539.4	538.6	537.9	541.9	538.6	542.3
172.5°	550.1	546.0	546.7	541.9	539.4	540.8	545.3	543.4	547.5
175°	553.0	548.6	547.8	542.7	538.3	541.6	547.1	546.7	551.5
177.5°	554.1	550.1	548.9	543.1	541.6	542.3	548.6	548.9	553.4
180°	548.2	548.2	548.2	548.2	548.2	548.2	548.2	548.2	548.2

(END OF REPORT)