

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: P199508

Luminaire Tested: **S124-DIW-ULO-2-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199508
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28061)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-ULO-2-30-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-3000K, NO LENS
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

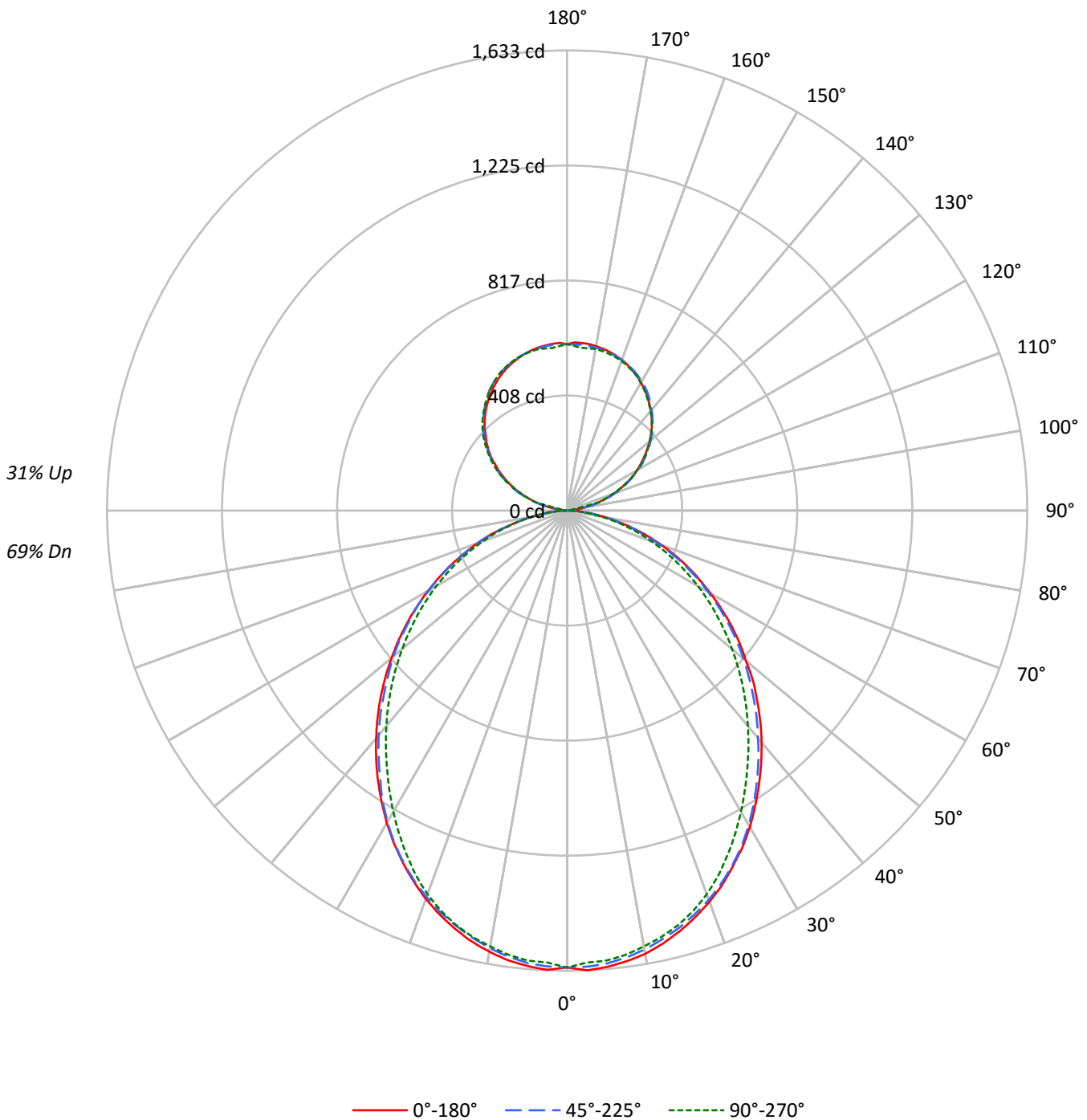
Lumens per Lamp: N/A
Luminaire Lumens: 5789.4 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: Semi-Direct

Input Watts (W): 55.1
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69
1	102	98	94	90	96	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	86	79	74	88	81	76	71	73	68	65	65	62	59	58	55	53	49
3	85	75	68	62	80	72	65	59	64	59	55	58	53	50	51	48	45	42
4	78	67	59	53	73	64	56	51	57	51	47	51	47	43	46	42	39	36
5	72	60	51	45	68	57	49	44	51	45	40	46	41	37	42	37	34	31
6	66	54	45	39	62	51	44	38	46	40	35	42	37	33	38	34	30	28
7	61	49	41	35	58	47	39	34	42	36	31	38	33	29	35	30	27	25
8	57	44	36	31	54	42	35	30	39	32	28	35	30	26	32	27	24	22
9	53	41	33	28	50	39	32	27	36	29	25	32	27	24	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12822	12822	12822
5°	12799	11583	12776
10°	12618	10523	12564
15°	12344	9577	12282
20°	12030	8651	11942
25°	11647	7714	11540
30°	11246	6832	11102
35°	10768	6019	10617
40°	10287	5299	10109
45°	9770	4638	9578
50°	9185	4014	9022
55°	8663	3432	8435
60°	8013	2876	7785
65°	7371	2333	7080
70°	6551	1795	6244
75°	5509	1262	5109
80°	4138	768	3875
85°	2430	340	2302



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.6	2.6
10°-20°	430.3	7.4
20°-30°	630.4	10.9
30°-40°	722.5	12.5
40°-50°	712.3	12.3
50°-60°	614.0	10.6
60°-70°	447.7	7.7
70°-80°	244.1	4.2
80°-90°	64.1	1.1
90°-100°	15.4	0.3
100°-110°	119.4	2.1
110°-120°	231.0	4.0
120°-130°	300.4	5.2
130°-140°	326.1	5.6
140°-150°	308.5	5.3
150°-160°	251.7	4.3
160°-170°	162.9	2.8
170°-180°	56.1	1.0
0°-30°	1213.4	21.0
0°-40°	1935.9	33.4
0°-60°	3262.1	56.3
0°-90°	4018.0	69.4
90°-120°	365.7	6.3
90°-150°	1300.7	22.5
90°-180°	1771.0	30.6
0°-180°	5789.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1621	1621	1621	1621	1621	
5°	1625	1614	1603	1612	1622	154
15°	1545	1533	1522	1525	1537	435
25°	1392	1388	1348	1376	1379	641
35°	1187	1174	1114	1158	1170	743
45°	954	934	881	918	935	736
55°	711	699	649	684	692	634
65°	472	461	425	449	453	466
75°	242	233	215	224	224	257
85°	55	56	52	53	52	62
90°	2	4	3	4	2	5
95°	21	5	6	6	18	26
105°	119	122	117	119	115	126
115°	232	238	233	235	226	230
125°	334	341	337	334	328	299
135°	425	429	425	421	414	327
145°	496	502	493	494	485	310
155°	549	552	548	546	540	253
165°	583	580	576	577	576	165
175°	597	590	580	590	594	57
180°	590	590	590	590	590	



TEST NUMBER: P199508

CATALOG NUMBER: S124-DIW-ULO-2-30-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3	1621.3
2.5°	1633.1	1614.4	1620.3	1616.4	1605.6	1616.4	1619.3	1613.5	1631.1
5°	1625.2	1607.6	1613.5	1607.6	1602.7	1606.6	1611.5	1604.6	1622.3
7.5°	1613.5	1594.8	1599.7	1594.8	1589.9	1593.8	1596.8	1590.9	1609.5
10°	1596.8	1577.2	1582.1	1576.2	1570.3	1574.2	1577.2	1571.3	1589.9
12.5°	1573.3	1554.6	1558.6	1554.6	1549.7	1550.7	1552.7	1546.8	1566.4
15°	1544.8	1526.2	1533.1	1529.2	1522.3	1526.2	1525.2	1518.4	1537.0
17.5°	1512.5	1494.8	1502.7	1498.8	1489.0	1494.8	1494.8	1484.1	1503.7
20°	1477.2	1458.6	1469.4	1459.6	1448.8	1454.7	1459.6	1446.8	1466.4
22.5°	1438.0	1418.4	1431.1	1413.5	1401.7	1408.6	1420.3	1406.6	1424.3
25°	1391.9	1376.2	1388.0	1363.5	1347.8	1357.6	1376.2	1362.5	1379.2
27.5°	1346.8	1331.1	1340.9	1313.5	1291.9	1304.7	1328.2	1316.4	1331.1
30°	1296.8	1284.1	1289.0	1256.7	1234.1	1247.8	1275.3	1268.4	1280.2
32.5°	1241.9	1232.1	1232.1	1197.8	1174.3	1190.0	1219.4	1217.4	1225.3
35°	1187.1	1181.2	1174.3	1137.1	1114.5	1129.2	1157.6	1165.5	1170.4
37.5°	1131.2	1127.3	1114.5	1078.2	1056.7	1072.4	1098.8	1110.6	1113.5
40°	1073.3	1071.4	1053.7	1019.4	997.9	1013.6	1041.0	1055.7	1054.7
42.5°	1014.5	1016.5	994.9	961.6	940.0	955.7	981.2	1000.8	995.9
45°	953.8	959.6	934.2	903.8	881.2	897.9	918.5	943.0	935.1
47.5°	894.9	901.8	875.3	844.0	822.4	840.1	860.6	887.1	875.3
50°	828.3	842.0	816.5	785.2	763.6	780.3	804.8	827.3	813.6
52.5°	770.5	780.3	757.7	727.3	706.7	720.5	745.0	767.5	752.8
55°	710.7	721.4	698.9	668.5	648.9	662.6	684.2	706.7	692.0
57.5°	647.9	658.7	638.1	610.7	592.1	606.8	629.3	645.0	631.3
60°	587.2	600.9	578.3	551.9	536.2	547.9	565.6	584.2	570.5
62.5°	528.3	541.1	519.5	495.0	480.3	491.1	509.7	524.4	511.7
65°	471.5	479.3	460.7	438.2	425.4	432.3	448.9	465.6	452.9
67.5°	413.7	421.5	402.9	383.3	370.5	377.4	391.1	406.8	395.0
70°	354.8	361.7	346.0	328.4	317.6	324.5	337.2	349.0	338.2
72.5°	299.0	303.9	289.2	275.4	267.6	272.5	281.3	292.1	287.2
75°	242.1	248.0	233.3	221.5	214.7	216.6	223.5	232.3	224.5
77.5°	188.2	194.1	182.3	173.5	169.6	170.6	175.5	182.3	172.5
80°	138.2	143.1	136.3	128.4	124.5	126.4	129.4	133.3	129.4
82.5°	93.1	98.0	93.1	88.2	85.3	87.2	88.2	90.2	87.2
85°	54.9	58.8	55.9	52.9	52.0	52.0	52.9	54.9	52.0
87.5°	24.5	27.4	25.5	23.5	20.6	21.6	22.5	24.5	22.5
90°	2.0	4.9	3.9	2.9	2.9	2.9	3.9	4.9	2.0
92.5°	6.6	3.5	3.5	3.5	3.5	3.5	3.5	3.8	4.5
95°	20.6	13.3	5.2	5.6	5.6	5.6	5.6	9.1	18.5
97.5°	40.2	46.9	10.1	6.6	6.6	6.6	10.1	44.4	37.4
100°	63.7	70.0	51.1	16.1	11.9	15.0	44.8	66.1	60.5
102.5°	89.9	98.0	94.1	52.8	30.4	45.1	91.3	93.8	87.5
105°	118.9	125.9	122.1	123.8	117.2	119.3	119.3	120.7	115.4
107.5°	147.6	153.6	151.5	150.1	144.8	146.2	149.7	149.0	143.1
110°	176.3	182.3	182.3	177.7	171.4	173.9	179.5	176.0	171.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	205.0	209.6	210.6	208.2	200.8	204.3	207.5	201.9	198.7
115°	231.9	238.6	237.9	238.2	233.0	233.0	234.7	230.5	226.0
117.5°	261.0	265.9	264.8	265.2	261.7	260.3	259.9	257.1	252.2
120°	286.5	292.1	292.8	290.4	287.9	285.1	286.9	283.0	277.8
122.5°	310.7	317.0	318.0	315.6	313.1	310.0	311.4	307.2	302.3
125°	334.4	341.4	341.4	339.7	337.2	334.1	333.7	330.3	328.5
127.5°	358.2	366.3	364.9	363.1	361.0	357.5	355.8	353.7	350.9
130°	382.4	388.0	386.6	385.2	383.8	379.6	378.2	376.1	372.9
132.5°	404.4	407.6	408.3	405.5	405.5	400.2	399.9	397.4	391.8
135°	424.7	427.9	429.3	425.1	425.1	419.8	420.9	417.4	413.9
137.5°	444.0	446.4	448.1	443.3	443.6	438.7	440.5	434.5	433.1
140°	462.5	463.5	466.7	461.4	460.7	456.5	459.0	453.0	451.3
142.5°	478.9	480.3	484.2	478.6	476.8	473.7	476.8	469.5	468.4
145°	495.7	496.1	501.7	495.0	492.9	490.5	494.3	485.6	484.9
147.5°	510.4	509.7	516.4	510.8	508.7	506.2	510.4	500.3	500.3
150°	524.1	523.4	529.7	525.1	523.0	520.9	523.4	513.9	513.9
152.5°	537.4	534.9	541.2	537.4	536.7	533.5	535.6	526.5	527.9
155°	548.6	546.1	552.1	548.9	547.5	545.1	546.5	537.7	539.8
157.5°	559.4	555.5	560.8	559.4	556.9	555.5	555.5	548.6	551.0
160°	568.8	564.3	568.8	566.7	564.6	562.9	564.3	557.3	560.4
162.5°	576.5	572.3	574.8	572.0	570.9	568.1	570.9	565.3	568.8
165°	582.8	578.3	580.0	576.2	575.5	573.4	576.9	573.0	576.5
167.5°	588.4	584.2	583.5	579.7	579.7	576.9	581.1	579.0	582.5
170°	592.3	588.8	587.4	581.8	581.8	579.3	585.3	583.5	587.7
172.5°	596.1	591.6	589.1	583.2	580.7	581.1	588.4	587.0	591.2
175°	596.8	593.3	590.5	584.2	579.7	582.8	590.2	590.5	593.7
177.5°	597.5	594.0	590.5	585.3	584.6	583.9	591.6	591.2	595.8
180°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5

(END OF REPORT)