

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: P199504

Luminaire Tested: **S124-DIW-ULO-1-35-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199504
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-1-35-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-3500K, NO LENS
DOWNLIGHT LL1-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

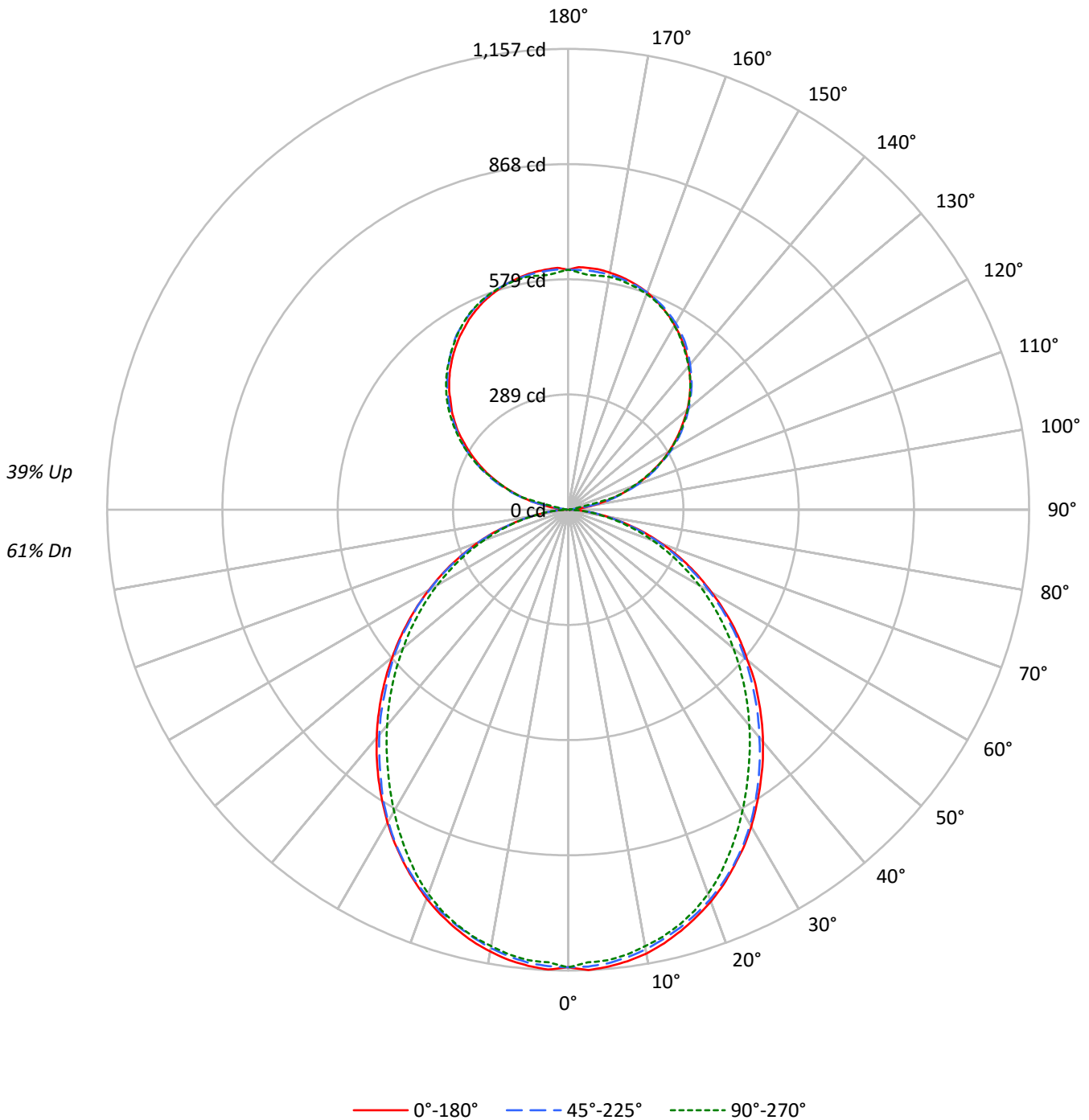
Lumens per Lamp: N/A
Luminaire Lumens: 4654.1 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: Semi-Direct

Input Watts (W): 40.1
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	110	110	110	110	103	103	103	103	90	90	90	77	77	77	66	66	66	61
1	100	96	92	89	94	90	87	84	79	76	74	68	67	65	59	58	56	52
2	92	84	78	73	85	79	73	69	69	65	61	60	57	54	52	50	48	44
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	51	71	62	55	49	54	49	44	48	43	40	41	38	35	32
5	70	59	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28
6	65	53	44	38	61	50	42	37	44	38	34	39	34	30	34	30	27	24
7	60	48	40	34	56	45	38	32	40	34	30	35	30	27	31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26	32	28	24	28	25	22	19
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9085	9085	9085
5°	9069	8207	9053
10°	8941	7456	8903
15°	8747	6786	8703
20°	8524	6130	8462
25°	8253	5466	8178
30°	7969	4841	7866
35°	7630	4265	7523
40°	7289	3755	7164
45°	6922	3286	6787
50°	6508	2844	6393
55°	6138	2432	5977
60°	5677	2038	5516
65°	5223	1653	5017
70°	4642	1272	4424
75°	3905	894	3620
80°	2932	544	2746
85°	1722	241	1629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	2.3
10°-20°	304.9	6.6
20°-30°	446.7	9.6
30°-40°	511.9	11.0
40°-50°	504.7	10.8
50°-60°	435.0	9.3
60°-70°	317.2	6.8
70°-80°	173.0	3.7
80°-90°	45.4	1.0
90°-100°	15.6	0.3
100°-110°	121.8	2.6
110°-120°	235.7	5.1
120°-130°	306.4	6.6
130°-140°	332.6	7.1
140°-150°	314.8	6.8
150°-160°	256.8	5.5
160°-170°	166.2	3.6
170°-180°	57.2	1.2
0°-30°	859.8	18.5
0°-40°	1371.7	29.5
0°-60°	2311.5	49.7
0°-90°	2847.1	61.2
90°-120°	373.0	8.0
90°-150°	1326.8	28.5
90°-180°	1807.0	38.8
0°-180°	4654.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1149	1149	1149	1149	1149	
5°	1152	1143	1136	1142	1150	109
15°	1095	1086	1079	1081	1089	308
25°	986	984	955	975	977	454
35°	841	832	790	820	829	526
45°	676	662	624	651	663	521
55°	504	495	460	485	490	449
65°	334	326	301	318	321	330
75°	172	165	152	158	159	182
85°	39	40	37	38	37	44
90°	1	3	2	3	1	4
95°	21	5	6	6	19	27
105°	121	125	120	122	118	128
115°	237	243	238	240	231	235
125°	341	348	344	340	335	305
135°	433	438	434	429	422	334
145°	506	512	503	504	495	316
155°	560	563	558	558	551	258
165°	595	592	587	588	588	168
175°	609	602	591	602	606	58
180°	602	602	602	602	602	



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CATALOG NUMBER: S124-DIW-ULO-1-35-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8	1148.8
2.5°	1157.1	1143.9	1148.1	1145.3	1137.7	1145.3	1147.4	1143.3	1155.8
5°	1151.6	1139.1	1143.3	1139.1	1135.6	1138.4	1141.9	1137.0	1149.5
7.5°	1143.3	1130.1	1133.5	1130.1	1126.6	1129.4	1131.4	1127.3	1140.5
10°	1131.4	1117.6	1121.0	1116.9	1112.7	1115.5	1117.6	1113.4	1126.6
12.5°	1114.8	1101.6	1104.4	1101.6	1098.1	1098.8	1100.2	1096.0	1109.9
15°	1094.6	1081.4	1086.3	1083.5	1078.7	1081.4	1080.7	1075.9	1089.1
17.5°	1071.7	1059.2	1064.8	1062.0	1055.0	1059.2	1059.2	1051.6	1065.5
20°	1046.7	1033.5	1041.2	1034.2	1026.6	1030.7	1034.2	1025.2	1039.1
22.5°	1018.9	1005.0	1014.1	1001.6	993.2	998.1	1006.4	996.7	1009.2
25°	986.3	975.2	983.5	966.1	955.0	962.0	975.2	965.4	977.3
27.5°	954.3	943.2	950.2	930.7	915.4	924.5	941.1	932.8	943.2
30°	918.9	909.9	913.4	890.4	874.5	884.2	903.6	898.8	907.1
32.5°	880.0	873.1	873.1	848.8	832.1	843.2	864.0	862.7	868.2
35°	841.1	837.0	832.1	805.7	789.7	800.1	820.3	825.8	829.3
37.5°	801.5	798.8	789.7	764.0	748.7	759.9	778.6	786.9	789.0
40°	760.5	759.2	746.7	722.3	707.1	718.2	737.6	748.0	747.4
42.5°	718.9	720.3	705.0	681.4	666.1	677.2	695.3	709.2	705.7
45°	675.8	680.0	661.9	640.4	624.4	636.2	650.8	668.2	662.6
47.5°	634.1	639.0	620.2	598.0	582.7	595.2	609.8	628.6	620.2
50°	586.9	596.6	578.6	556.3	541.1	552.9	570.2	586.2	576.5
52.5°	545.9	552.9	536.9	515.4	500.8	510.5	527.9	543.8	533.4
55°	503.6	511.2	495.2	473.7	459.8	469.5	484.8	500.8	490.4
57.5°	459.1	466.7	452.2	432.7	419.5	429.9	445.9	457.0	447.3
60°	416.0	425.8	409.8	391.0	379.9	388.3	400.8	414.0	404.2
62.5°	374.4	383.4	368.1	350.8	340.3	348.0	361.2	371.6	362.6
65°	334.1	339.6	326.4	310.5	301.4	306.3	318.1	329.9	320.9
67.5°	293.1	298.7	285.5	271.6	262.5	267.4	277.1	288.2	279.9
70°	251.4	256.3	245.2	232.7	225.0	229.9	238.9	247.3	239.6
72.5°	211.8	215.3	204.9	195.2	189.6	193.1	199.3	207.0	203.5
75°	171.6	175.7	165.3	157.0	152.1	153.5	158.4	164.6	159.1
77.5°	133.4	137.5	129.2	122.9	120.2	120.9	124.3	129.2	122.2
80°	97.9	101.4	96.5	91.0	88.2	89.6	91.7	94.5	91.7
82.5°	66.0	69.5	66.0	62.5	60.4	61.8	62.5	63.9	61.8
85°	38.9	41.7	39.6	37.5	36.8	36.8	37.5	38.9	36.8
87.5°	17.4	19.4	18.1	16.7	14.6	15.3	16.0	17.4	16.0
90°	1.4	3.5	2.8	2.1	2.1	2.1	2.8	3.5	1.4
92.5°	6.8	3.6	3.6	3.6	3.6	3.6	3.6	3.9	4.6
95°	21.1	13.6	5.4	5.7	5.7	5.7	5.7	9.3	18.9
97.5°	41.0	47.8	10.4	6.8	6.8	6.8	10.4	45.3	38.2
100°	65.0	71.4	52.1	16.4	12.1	15.3	45.7	67.5	61.7
102.5°	91.7	99.9	96.0	53.9	31.1	46.0	93.2	95.6	89.2
105°	121.3	128.5	124.6	126.3	119.6	121.7	121.7	123.1	117.8
107.5°	150.6	156.7	154.5	153.1	147.8	149.2	152.8	152.0	146.0
110°	179.9	185.9	185.9	181.3	174.9	177.4	183.1	179.5	174.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	209.1	213.8	214.9	212.4	204.9	208.4	211.6	205.9	202.7
115°	236.6	243.4	242.7	243.0	237.7	237.7	239.5	235.2	230.6
117.5°	266.2	271.2	270.2	270.5	267.0	265.5	265.2	262.3	257.3
120°	292.3	298.0	298.7	296.2	293.7	290.9	292.7	288.7	283.4
122.5°	316.9	323.4	324.4	321.9	319.4	316.2	317.6	313.4	308.4
125°	341.2	348.3	348.3	346.5	344.1	340.8	340.5	336.9	335.1
127.5°	365.5	373.7	372.2	370.5	368.3	364.8	363.0	360.8	358.0
130°	390.1	395.8	394.4	392.9	391.5	387.2	385.8	383.7	380.5
132.5°	412.6	415.8	416.5	413.6	413.6	408.3	407.9	405.4	399.7
135°	433.3	436.5	437.9	433.6	433.6	428.3	429.4	425.8	422.2
137.5°	452.9	455.4	457.2	452.2	452.5	447.6	449.3	443.3	441.8
140°	471.8	472.9	476.1	470.8	470.0	465.8	468.3	462.2	460.4
142.5°	488.6	490.0	493.9	488.2	486.5	483.2	486.5	479.0	477.9
145°	505.7	506.1	511.8	505.0	502.9	500.4	504.3	495.4	494.7
147.5°	520.7	520.0	526.8	521.1	518.9	516.4	520.7	510.4	510.4
150°	534.6	533.9	540.3	535.7	533.6	531.4	533.9	524.3	524.3
152.5°	548.2	545.7	552.1	548.2	547.5	544.3	546.4	537.1	538.6
155°	559.6	557.1	563.2	560.0	558.5	556.0	557.5	548.6	550.7
157.5°	570.7	566.8	572.1	570.7	568.2	566.8	566.8	559.6	562.1
160°	580.3	575.7	580.3	578.2	576.0	574.3	575.7	568.5	571.8
162.5°	588.2	583.9	586.4	583.5	582.5	579.6	582.5	576.7	580.3
165°	594.6	590.0	591.7	587.8	587.1	585.0	588.5	584.6	588.2
167.5°	600.3	596.0	595.3	591.4	591.4	588.5	592.8	590.7	594.2
170°	604.2	600.7	599.2	593.5	593.5	591.0	597.1	595.3	599.6
172.5°	608.2	603.5	601.0	595.0	592.5	592.8	600.3	598.9	603.2
175°	608.9	605.3	602.4	596.0	591.4	594.6	602.1	602.4	605.7
177.5°	609.6	606.0	602.4	597.1	596.4	595.7	603.5	603.2	607.8
180°	602.4	602.4	602.4	602.4	602.4	602.4	602.4	602.4	602.4

(END OF REPORT)