

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: P231573

Luminaire Tested: **S124-DR-1-35-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231573
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29681)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DR-1-35-X-0048-1-U-DD-3-W
Description: DEFINE 4 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

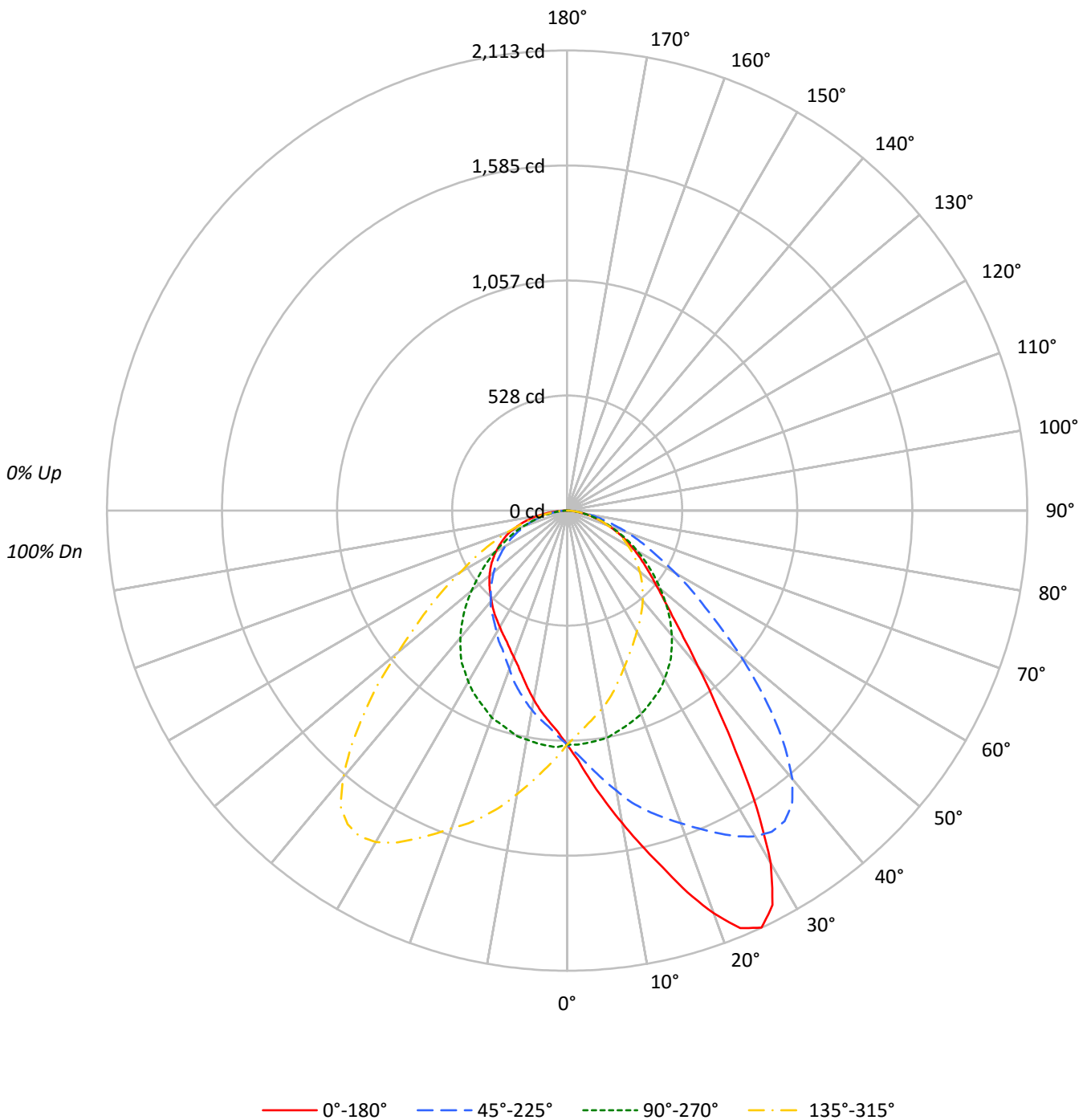
Lumens per Lamp: N/A
Luminaire Lumens: 3147.9 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.39 / 1.24 / 1.51
Luminous Opening: Rectangular (W 3.92' x L: 0.31' x H: 0')
CIE Type: Direct

Input Watts (W): 28
Input Voltage (V): 120
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



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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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9633	9633	9633	9633
5°	11199	9633	8725	9741
10°	13257	9636	8025	9718
15°	15724	9527	7319	9657
20°	18766	9478	6828	9650
25°	20891	9363	6525	9501
30°	19348	9250	6394	9385
35°	14746	9068	6345	9265
40°	10937	8750	6328	8925
45°	8642	8326	6374	8503
50°	7444	7793	6482	7988
55°	6780	7233	6624	7436
60°	6290	6685	6774	6918
65°	5831	6106	6976	6297
70°	5292	5528	7179	5711
75°	4708	4812	7167	4951
80°	3973	3922	6915	4231
85°	2879	2776	6374	3496



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	3.3
10°-20°	323.8	10.3
20°-30°	538.1	17.1
30°-40°	626.3	19.9
40°-50°	563.9	17.9
50°-60°	453.3	14.4
60°-70°	319.7	10.2
70°-80°	172.5	5.5
80°-90°	45.6	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	966.6	30.7
0°-40°	1592.9	50.6
0°-60°	2610.1	82.9
0°-90°	3147.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3147.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1075	1075	1075	1075	1075	
5°	1245	1071	970	1083	1245	125
15°	1695	1027	789	1041	1695	491
25°	2113	947	660	961	2113	942
35°	1348	829	580	847	1348	851
45°	682	657	503	671	682	539
55°	434	463	424	476	434	391
65°	275	288	329	297	275	272
75°	136	139	207	143	136	145
85°	28	27	62	34	28	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075
2.5°	1147	1138	1122	1093	1076	1044	1031	1021	1014	1014	1034
5°	1245	1217	1178	1118	1071	1018	992	975	970	970	995
7.5°	1349	1309	1242	1143	1065	992	957	935	928	931	963
10°	1457	1404	1306	1171	1059	970	923	892	882	889	930
12.5°	1573	1500	1374	1187	1042	939	887	846	835	844	894
15°	1695	1604	1428	1204	1027	911	847	800	789	801	856
17.5°	1838	1716	1478	1217	1011	882	804	760	749	758	819
20°	1968	1829	1528	1225	994	853	766	724	716	724	774
22.5°	2075	1937	1580	1218	971	818	730	695	687	691	737
25°	2113	2020	1634	1203	947	779	698	671	660	665	703
27.5°	2042	2033	1686	1181	925	748	669	644	639	643	678
30°	1870	1963	1728	1155	894	715	641	621	618	627	646
32.5°	1621	1803	1748	1122	862	680	615	598	598	600	619
35°	1348	1582	1741	1084	829	648	590	577	580	576	594
37.5°	1121	1344	1697	1049	789	619	565	555	561	556	575
40°	935	1127	1608	1008	748	587	540	534	541	536	545
42.5°	790	947	1484	965	703	557	514	512	522	514	519
45°	682	802	1341	921	657	527	488	491	503	493	494
47.5°	599	690	1188	871	607	497	462	469	484	471	467
50°	534	602	1042	817	559	467	435	445	465	449	440
52.5°	481	531	896	760	511	435	408	423	445	428	413
55°	434	472	773	701	463	403	380	400	424	405	386
57.5°	391	421	672	640	418	370	353	374	401	381	358
60°	351	373	575	572	373	337	324	348	378	355	329
62.5°	312	330	486	504	329	303	295	321	353	328	299
65°	275	289	413	439	288	268	264	293	329	299	268
67.5°	237	248	353	376	245	232	232	264	303	270	236
70°	202	208	292	313	211	199	199	232	274	238	205
72.5°	168	173	235	253	174	165	169	202	240	208	174
75°	136	139	182	199	139	133	138	172	207	177	144
77.5°	106	107	140	150	106	103	108	143	171	145	114
80°	77	78	100	107	76	75	81	112	134	114	86
82.5°	50	52	67	69	49	50	56	81	97	83	61
85°	28	29	38	38	27	29	35	50	62	54	39
87.5°	11	11	15	15	11	13	16	27	31	28	20
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1075	1075	1075	1075	1075	1075
2.5°	1047	1088	1104	1136	1147	1147
5°	1022	1083	1130	1194	1229	1245
7.5°	996	1077	1157	1257	1324	1349
10°	970	1068	1183	1321	1423	1457
12.5°	951	1061	1214	1390	1523	1573
15°	916	1041	1224	1449	1625	1695
17.5°	888	1025	1240	1505	1741	1838
20°	856	1012	1246	1552	1862	1968
22.5°	827	985	1248	1609	1972	2075
25°	787	961	1232	1665	2048	2113
27.5°	751	938	1211	1720	2057	2042
30°	722	907	1189	1757	1979	1870
32.5°	684	875	1149	1774	1799	1621
35°	652	847	1114	1758	1568	1348
37.5°	626	804	1079	1710	1328	1121
40°	591	763	1037	1599	1114	935
42.5°	561	718	993	1468	935	790
45°	531	671	943	1319	794	682
47.5°	500	624	892	1177	684	599
50°	470	573	842	1014	598	534
52.5°	440	524	783	881	528	481
55°	409	476	716	772	470	434
57.5°	376	432	651	666	418	391
60°	344	386	590	565	371	351
62.5°	310	338	520	491	328	312
65°	276	297	454	418	287	275
67.5°	240	259	390	352	246	237
70°	204	218	326	293	209	202
72.5°	172	177	267	236	174	168
75°	139	143	211	188	140	136
77.5°	111	112	162	144	109	106
80°	80	82	116	105	80	77
82.5°	56	55	78	71	56	50
85°	34	34	46	42	31	28
87.5°	17	17	21	19	13	11
90°	0	0	0	0	0	0

(END OF REPORT)